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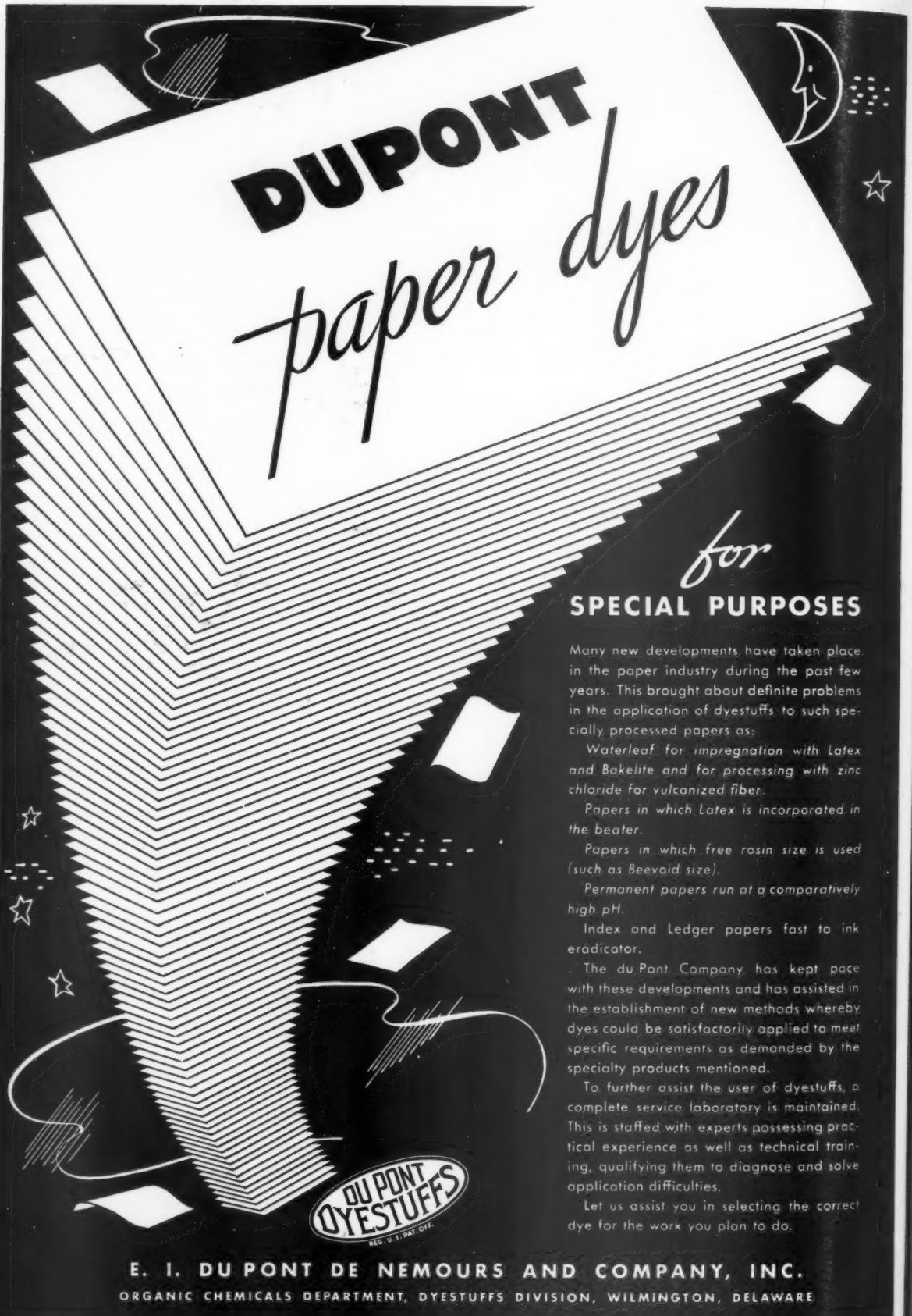
Pacific PULP & PAPER Industry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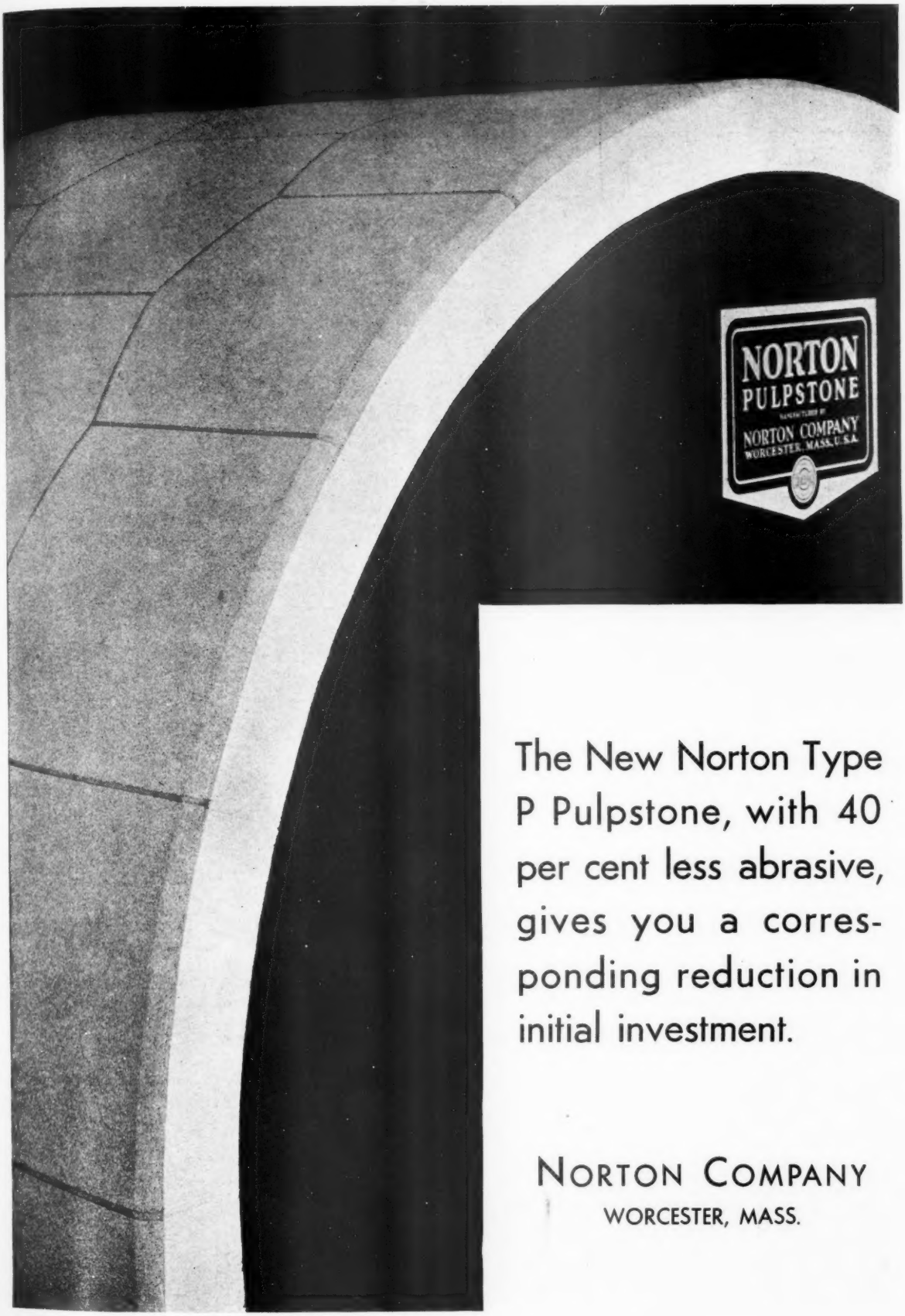

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Pacific PULP & PAPER Industry

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Superintendents To Discuss Machine Clothing

Plans for December 4th meeting in Seattle of the Pacific Coast Division of the American Pulp & Paper Mill Superintendents Association announced by General Chairman Thomas J. Bannan

PLANS for a large and highly interesting Winter meeting of the Pacific Coast Division of the American Pulp and Paper Mill Superintendents Association meeting are nearly completed according to an announcement by general chairman Thomas J. Bannan.

The meeting will be held December 3rd and 4th at the New Washington Hotel in Seattle. Chairman Bannan, who was appointed by Ray C. Onkels, chairman of the Pacific Coast Division, has in turn appointed the following general committee: G. J. Armbruster and L. P. Fortier of Everett; James P. V. Fagan of Anacortes; W. T. Webster and A. D. Wood of Tacoma; Leon Dupuis and T. H. Beaune of Port Angeles and George Cropper of Shelton.

No regular program has been scheduled for Friday afternoon, December 3d, but golf will be arranged for those who desire to play and who so inform James Brinkley of 417 Ninth Avenue South, Seattle. Mr. Brinkley is in charge of pre-convention activities.

Friday Evening

Registration will begin at 5 p. m. Friday, December 3rd, and Earl G. Thompson is in charge.

The meeting will officially begin Friday evening with a Pioneer Costume Party. Costumes are to be in the styles of the 1880's. Valuable prizes will be awarded to both men and women for the finest, the funniest, the most original and the truest to the period costumes. There will be dancing and entertainment, too, the object being a good time for everyone.

The costume winners of last year, who are defending champions this year, include Mrs. Jerome Janacek, Mrs. R. T. Petrie, George W. Brown and R. T. Petrie.

A. S. Quinn is in charge of the entertainment for the meeting.

Saturday Morning

The business session will open at 9:30 Saturday morning, December 4th, under the chairmanship of Ray C. Onkels.

"A Symposium on Machine Clothing" is the title of the business program and will include papers presented by men experienced in the manufacture and use of felts and wires. The papers will emphasize methods of increasing felt and wire life. Felt and wire manufacturers will participate in this symposium along with operators. It is the aim of Mr. Onkels to make this symposium worthwhile from the viewpoint of machine operators.

Following the papers the Pacific Coast Division of the American Pulp and Paper Mill Superintendents Association will hold the annual election of officers.

Luncheon Program

The ladies are invited to attend the Saturday luncheon along with the men and hear a speaker well known in the Pacific Northwest, Colonel Abbott Boone, executive officer of the Fourth Reserve District, United States Army. Colonel Boone will speak on "World Conditions from a Military Aspect."

The Round Table

After the luncheon, at 2 o'clock the regular superintendent's round table will be called to order by Chairman Ray C. Onkels. In conducting the afternoon session Mr. Onkels will be assisted by L. S. McCurdy, first vice-chairman of the Pacific Coast Division.

Chairman Onkels will appreciate receiving any questions mill executives may wish to have discussed. A letter to Mr. Onkels who is superintendent of the Westminster Paper Company at New Westminster, British Columbia, or to L. S. McCurdy, superintendent of the National Paper Products Division of the Crown Zellerbach Corporation at Port Townsend, Washington, enclosing the questions, will be sufficient to have them introduced for answering at the round table discussion. As has been the custom in the past the questions turned in will be presented anonymously.

WHAT SUPERINTENDENTS HAVE THE LONGEST RECORDS OF CONTINUOUS SERVICE IN PACIFIC COAST PULP AND PAPER MILLS . . . . ?

The Pacific Coast Division of the American Pulp & Paper Mill Superintendents Association desires this information so that these superintendents may be honored at the forthcoming division meeting in Seattle, December 4th.

Drop a line today giving the names of the men whom you think have the longest records of service, to THOMAS J. BANNAN, GENERAL CHAIRMAN, 417 NINTH AVENUE SOUTH, SEATTLE, or to this journal.

Saturday Evening

Before the banquet Saturday evening a reception will be held at the New Washington to honor the pioneer pulp and paper mill superintendents of the Pacific Coast and the new officers of the association.

The chairman of the meeting, Thomas J. Bannan, desires to have all of the superintendents present who have long service records in Pacific Coast pulp, paper and board mills, and he asks that superintendents and their friends write him or this journal giving the names of the men whom they believe possess the longest service records as superintendents in Pacific Coast mills.

It is the desire of the Pacific Coast Division to honor these men at both pioneer costume party Friday evening and the reception Saturday evening for the fine service they have contributed toward the development of the industry in the West. The request for names embraces those men who are retired as well as those who are now active.

Following the reception the banquet will be held at 7:30. Features will be a song contest and the distribution of prizes for the best costumes at the pioneer party Friday evening.

There will be dancing in the ballroom after the banquet.

Ladies Program

The program for the ladies attending the meeting has not been completed at the time of going to press but General Chairman Thomas J. Bannan promises it will be interesting and thoroughly enjoyable.

Everyone Invited

Both Ray C. Onkels, chairman of the Pacific Coast Division and Meeting Chairman Thomas J. Bannan want it made clear that everyone connected with or interested in the pulp and paper industry is invited to attend the meeting in Seattle December 3rd and 4th.

The PLACE is the New Washington Hotel in Seattle—the TIME is from 5 p. m. FRIDAY, DECEMBER 3rd through SATURDAY evening DECEMBER 4th.

Reservations for rooms and the meeting should be made with the New Washington Hotel or General Chairman Thomas J. Bannan, Western Gear Works, 417 Ninth Avenue South, Seattle.

Dr. Rys Calls On Coast Mills

During October Pacific Coast pulp and paper mills were visited by a prominent European pulp manufacturer, Dr. L. J. Rys, managing director of the Harmanec Paper Mills, Limited of Harmanec, Czechoslovakia.

This was Dr. Rys' first trip to the Pacific Coast although he was familiar with Eastern Canadian and American mills having spent a year beginning in 1923, at the Kipawa mill of the Canadian International Paper Company where he instituted the research work. On his visits to Pacific Coast mills, Dr. Rys was introduced by Brian L. Shera, chemical engineer with the Pennsylvania Salt Manufacturing Company of Washington.

Dr. Rys' company has two sulphite pulp and paper mills, the largest producing about 50 tons of sulphite papers per day. It has five paper machines. Native spruce is used for the sulphite pulp. There is a large quantity of this spruce in Czechoslovakia which is cut on a sustained-yield basis under government control. Sulphite is also made from native beech. Dr. Rys' mill makes sulphite papers of all types.

Thomas W. Toovey, who was associated with the British Columbia Pulp & Paper Company for several years, spent two and a half years working with Dr. Rys on bleaching and operating problems, returning to the United States last year to become associated with the Pennsylvania Salt Manufacturing Company.

Kelley Succeeds Bates at Johns-Manville

Alexander Cromwell, vice-president in charge of Pacific Coast operations for the Johns-Manville Corporation, announced early in November the appointment of W. B. Kelley as manager of the company's asbestos paper and felt mill at Pittsburg, California.

Mr. Kelley succeeds C. L. Bates, veteran of nearly fifty years of service with Johns-Manville, who has retired. Mr. Bates began his paper mill career in 1890 with the Fiber Corporation of Lockport, New York, which was later absorbed by Johns-Manville. In 1924 he was made manager of that operation and four years later was transferred to Waukegan, Illinois, as one of the superintendents. Later in the same year, 1928, he was made manager of the Pittsburg plant.

Mr. Kelley graduated from the University of California in 1919 and worked from 1919 to 1926 at Riverside, California, for the Portland Cement Company, becoming mill superintendent. He left the cement industry to join the former Celite Company at Lompoc, California, which was later bought by Johns-Manville. In 1928 he became production manager and a few months later was transferred to Redwood City as manager of Johns-Manville operations there. In 1934 Mr. Kelley was placed in charge of the operations at Lompoc when Mr. Cromwell, then manager at Lompoc, became vice-president in charge of all Pacific Coast operations.

September Pulp Imports Are Heavy

Imports of wood pulp during September remained at a high level with a tonnage of 187,241 short tons, valued at $8,434,951. These figures compare with 201,019 short tons valued at $8,873,086 in August and with 186,558 short tons valued at $6,989,193 in September, 1936.

The September imports brought the total imports of chemical wood pulp for the nine months of 1937 up to 1,664,625 short tons compared with 1,500,715 short tons in the first nine months of 1936.

This is a 1937 increase of 163,910 short tons or 10.9 per cent more than the chemical wood pulp imports for the same 1936 period.

Rayonier Incorporated Formed by Three Company Merger

Largest dissolving pulp manufacturer created by vote of stockholders to merge the Rainier Pulp & Paper Company, the Grays Harbor Pulp & Paper Company and the Olympic Forest Products Company—Four operating pulp mills in Washington, fifth under construction in Florida

RAYONIER INCORPORATED came into existence on October 28th when the stockholders of the Rainier Pulp and Paper Company, the Grays Harbor Pulp and Paper Company and of the Olympic Forest Products Company, voted to merge into the one organization.

Said to be the largest producer of dissolving pulps in the world, Rayonier Incorporated, naturally enough, takes its name from the brand of dissolving pulp produced first by the Rainier Pulp and Paper Company, and later under contract by the other two mills.

The Consolidated company will have an annual capacity of approximately 232,000 tons of dissolving pulps (used chiefly in rayon), about 50,000 tons of paper making bleached sulphite and 18,000 tons of finished paper, the latter being produced by the Grays Harbor mill.

Rayonier Incorporated was unanimously acclaimed in the pulp industry as a happy choice as the name of the combined mills. It has four operating mills in the State of Washington and is now building a fifth mill at Fernandina, Florida.

To avoid confusion it has been announced that the several mills will be designated as follows:

Rayonier Incorporated, Shelton Division, will be the name of the former Rainier Pulp & Paper Company bleached sulphite pulp mill at Shelton, Washington.

Rayonier Incorporated, Grays Harbor Division, will be the designation of the former Grays Harbor Pulp & Paper Company at Hoquiam, Washington.

Rayonier Incorporated, Port Angeles Division, is to be the name of the former Olympic Forest Products Company bleached sulphite pulp mill at Port Angeles, Washington.

The Shaffer Pulp Company of Tacoma, Washington, is now a wholly owned subsidiary of Rayonier Incorporated.

The Fernandina Pulp & Paper Company of Fernandina, Florida, with a 180 tons per day bleached sulphite pulp mill now under construction will continue to be known by that name as it is a separate subsidiary company of Rayonier, Incorporated.

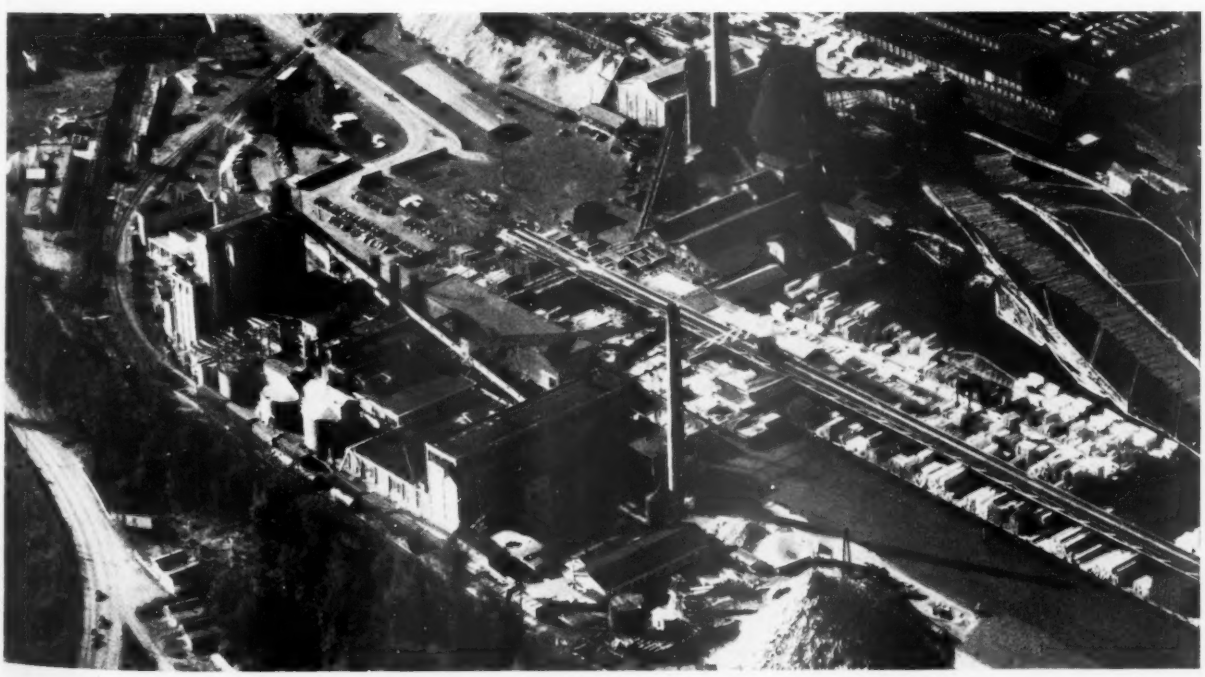
The new company will have outstanding 626,205 shares of $2 cumulative convertible preferred stock with a total of 800,000 shares authorized, and 963,872 shares of common stock outstanding with 3,000,000 shares authorized. The preferred stock will be convertible for five years into common stock, share for share.

It is stated in the plan of reorganization that it is intended to apply for listing the shares on the San Francisco and New York Stock exchanges.

Officers

Edward M. Mills of San Francisco has been chosen as president of Rayonier Incorporated. Mr. Mills was president of the three merging companies. J. D. Zellerbach is the executive vice-president of the new company. I. Zellerbach and W. L. Raymond are vice-presidents; Charles H. Conrad is secretary-treasurer and L. G. Wilson, comptroller.

Directors of the new Rayonier Incorporated are: Edward M. Mills, M. A. Arnold, Eugene Bashore, Charles R. Blyth, Charles H. Conrad, Miller Freeman, W. S. Lucey, W. H. Orrick, Nor-



The original mill of RAYONIER INCORPORATED, the SHELTON DIVISION » » » Formerly the Rainier Pulp & Paper Company » » » Constructed in 1926 and 1927 » » » Operations were begun in 1927 » » » Here the famous RAYONIER dissolving pulp was developed.

man W. Wilson, I. Zellerbach and J. D. Zellerbach.

The executive committee consists of Edward M. Mills, J. D. Zellerbach and Charles R. Blyth.

Headquarters in San Francisco

Headquarters of the new company will be in San Francisco. The three predecessor companies all have been engaged in producing wood fibre pulp for use in the manufacture of rayon, cellophane and other cellulose products. The companies have been under a single management. Purpose of the consolidation, it is understood, is to facilitate expansion plans necessary to meet the projected demand for rayon and cellophane pulps. Included in the expansion plans is a mill now under construction at Fernandina, Fla., representing an investment of approximately $6,000,000 and designed to have an annual output of approximately 65,000 tons of rayon pulp.

Plans for financing the construction of this mill have not been promulgated as yet, it being anticipated that about $5,000,000 of additional capital will be needed.

Rayonier Inc. has assumed the sales contracts of the predecessor companies whereunder sales of dissolving pulp for rayon production are made to customers in the United States, Japan, England, France, Belgium, and Italy. Among the new company's larger customers in the United States are E. I. du Pont de Nemours & Co., American Viscose Corp., Sylvania Industrial Corp., and North American Rayon Corp.

In addition to dissolving pulp for rayon making purposes, Rayonier will produce paper pulp for sale under contract to the S. D. Warren Co., Boston, and will continue the arrangement previously existing between Hammermill Paper Co. and Grays Harbor for the production of sulphite printing and writing papers.

Basis of Share Exchange

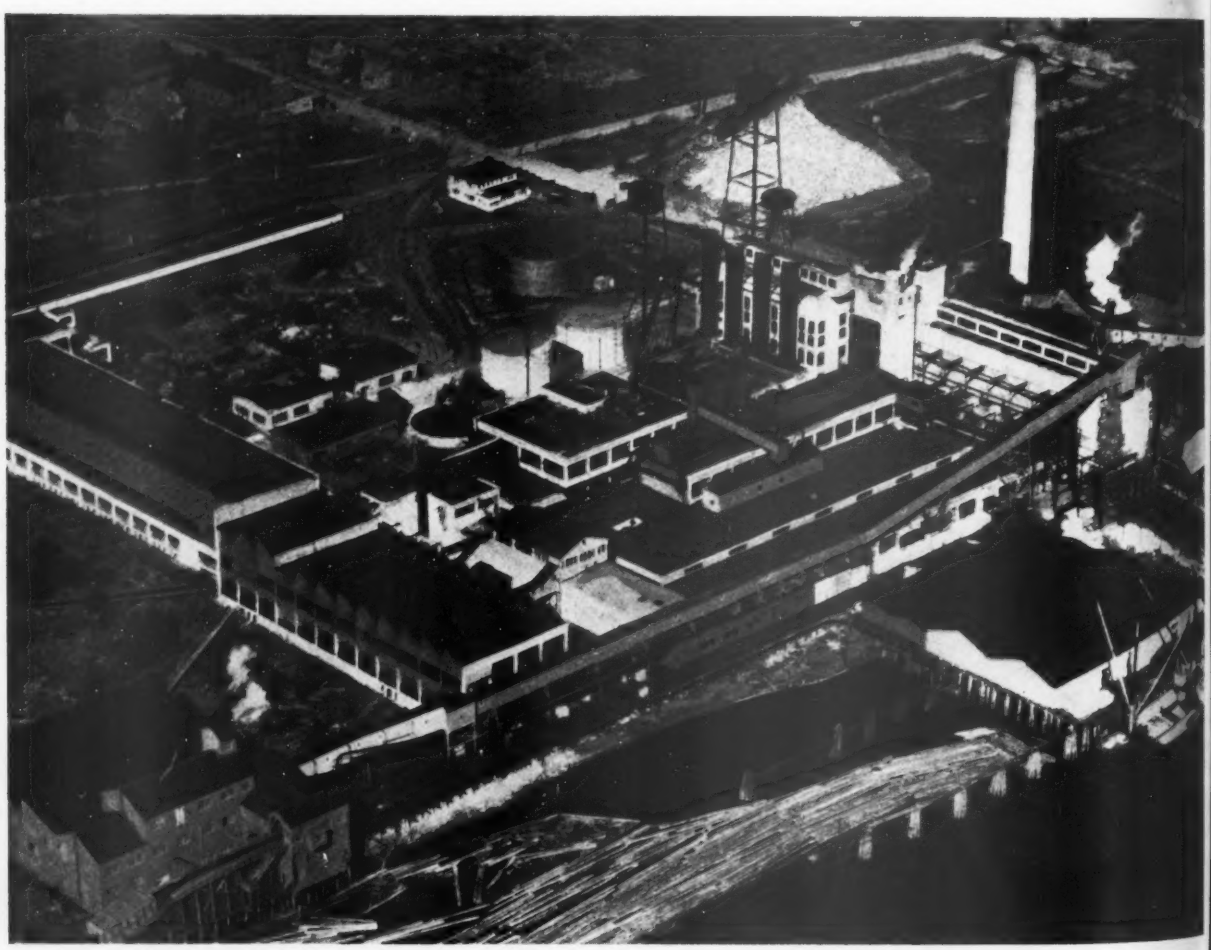
The merger of the three companies is to be accomplished by an exchange of securities on the following basis:

Each share of Rainier's present capital stock will be exchanged for eight-tenths of a share of $2 preferred stock and one and two-tenths shares of common stock of the new company.

Each share of Grays Harbor's present $2 preferred stock will be exchanged for one share of new $2 preferred and seven one-hundredths share of new common, and each common share will be exchanged for one and seven one-hundredths shares of common stock of the new company.

Each share of Olympic Forest Product's present $2 preferred will be exchanged for one share of $2 preferred and two one-hundredths share of common stock, and each share of present common will be exchanged for one and one two-hundredths shares of common stock of the new company.

J. D. ZELLERBACH
Executive Vice-President
RAYONIER INCORPORATED



RAYONIER INCORPORATED, GRAYS HARBOR DIVISION formerly the Grays Harbor Pulp & Paper Company » » » Constructed in 1928 » » » Producer of dissolving pulps, paper pulps and sulphite papers including the well-known Management Bond.

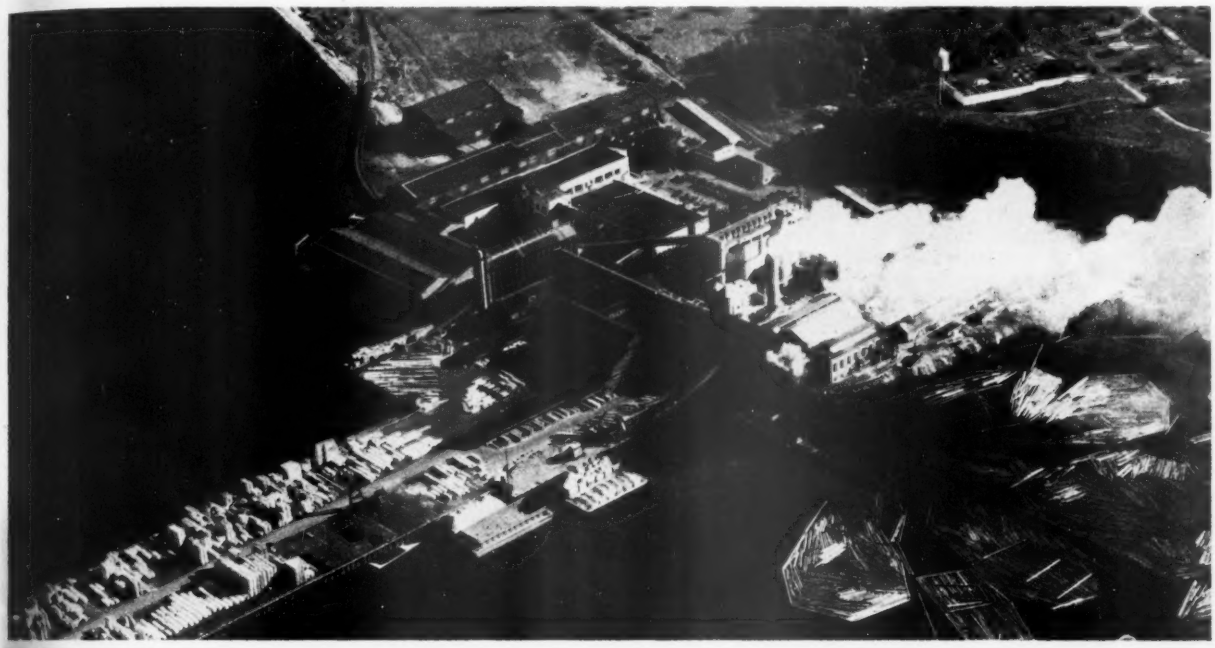
Production for Last Five Years

Production of dissolving pulps by each of the constituent companies for the last five fiscal years ended April 30, follows (in tons):

Years ended April 30:	Rainier	Grays Harbor	Olympic	Total
1937	58,974	39,371	37,371	135,716
1936	52,010	24,460	31,992	108,462
1935	53,969	10,412	36,921	101,302
1934	48,439	None	17,629	66,068
1933	44,728	None	3,621	48,349

The mill capacity of each of the constituent companies available to produce dissolving pulps has been increased during or subsequent to the last fiscal year, and the present annual capacities are as follows: Rainier, 110,000 tons; Grays Harbor, 76,000 tons; Olympic, 46,000 tons; total, 232,000 tons.

Based upon commitments already



RAYONIER INCORPORATED, PORT ANGELES DIVISION » » » Built in 1929 and known as the Olympic Forest Products Company » » » Produces dissolving pulps, paper pulps and lumber.

SHAFFER PULP COMPANY, Tacoma, Washington, constructed in 1929 as Shaffer Box Company » » » Changed to Shaffer Pulp Company in August, 1936, when it became a wholly owned subsidiary of the Rainier Pulp & Paper Company » » » Produces high grade unbleached sulphite pulp which is barged in semi-dry shredded form to the Shelton Division where it is processed into dissolving pulp.

made for the calendar year 1938, it is estimated that sales of dissolving pulps by the new consolidated company for that period will be distributed as follows: United States, 98,500 tons; Japan, 113,500 tons; European countries, 22,500 tons; South American, 1,500 tons; total 236,500 tons.

As commitments have been made to sell in 1938 slightly more pulp than the present annual manufacturing capacity, it appears that the company anticipates some tonnage will be obtained from the new Florida plant during 1938. It is scheduled to go into operation the latter part of 1938.

In addition to the foregoing dissolving pulp capacity, production of pulps of ordinary grades by each of the constituent companies, exclusive of that produced by the Grays Harbor paper mills, which is shown in a separate column, for each of the last five fiscal years ended April 30 has been as follows (in tons):

Grays Harbor paper output.	Years end. April 30	Ordinary pulp output — Rainier	Grays H.	Olympic	Total
17,978	1937	997	19,433	28,049	48,479
16,653	1936	754	29,967	26,324	56,045
14,132	1935	149	28,941	18,571	47,661
16,766	1934	4,613	37,842	32,564	75,019
10,887	1933	2,801	10,767	11,106	24,674

In the course of producing dissolving pulps, a small amount of pulp is produced which does not meet the qualifications of dissolving pulps. This so-called "off-grade" pulp usually is sold for special uses in paper manufacture.

It is stated that although the matter of dividends on the stock of the new company will be reserved for future decision, it is believed earnings will justify regular dividends on the preferred ($2 a share a year), and dividends on the common stock at an initial rate of $2 a share yearly.

Soundview Building Chipping Plant Addition

On October 28th the Soundview Pulp Company broke ground for a new chipping plant building addition to its wood preparation department. Located at the west end and just south of the log break down plant, the new building will be 60 by 80 feet two stories in height. Foundations and floor are to be of concrete with the rest of the construction of frame mill type with a sawtooth roof. It is expected the new plant will be in operation by February 1st, according to Justin H. McCarthy, plant engineer.

The purpose of the new plant is to provide more chipping capacity and to do the chipping more efficiently. At the present time the chipping plant is located at the east end and south side of the log break down plant, which makes it necessary to convey the cleaned wood discharged from the west end of break down plant back the 260 feet to the chipping plant. This consumes unnecessary power and the two conveyors now in use are frequently the bottle necks when the breakdown plant is turning out clean cants at a rapid rate.

By locating the new chipping plant at the clean wood discharge end of the breakdown plant only short conveyors will be necessary. The present three chip screens housed in the old chipping plant will be increased to four with the addition of a Sumner shaker type screen. This new screen will occupy part of the space now used by the chippers.

In the new building will be five chippers including the four old ones and 1 new 110 inch Sumner with a 250 horsepower General Electric direct connected synchronous motor drive operating at 200 rpm on 2200 volts. With the new chipper Soundview will have three 110 inch chippers, one 84 inch and one 72 inch chipper.

The five chippers will have overhead discharge into a common belt type chip conveyor to the screens located in the present building. When the job is finished Soundview will convey chips 260 feet to the screens instead of cants the same distance to the chippers.

Changes will also be made in the log breakdown plant with the installation of a new sawmill carriage having electric dogs. This is expected to speed up the handling of logs on the carriage.

Another large Stetson-Ross cant type barker will be installed in the breakdown plant to provide more cant cleaning capacity.

The new 110 inch chipper will take the clean wood coming directly from the saws while the other chippers will handle the wood that has been cleaned by the three Stetson-Ross barkers and the small chipper will take the slabs which have been cleaned on hand barkers.

Engineer McCarthy's problem is to so arrange the construction and chipper moving and conveyor changes as to not interfere with the production of chips for the 500 tons per day bleached sulphite pulp mill, which requires the sawing of approximately 500,000 boardfeet of logs each 24 hours.

The construction contract has been awarded to the Austin Company of Seattle.

St. Helens Digesters Replaced

Three new kraft digesters installed by the St. Helens Pulp & Paper Co. are now in operation. These are slightly larger than those which they replaced, which will make possible increased production when the company desires it in the future.

Fred Enders On Coast

Fred Enders, manager of the Bulkley Dunton Pulp Company of New York pulp and paper brokers, was a visitor to the Coast during October. Mr. Enders' company represents several Coast pulp mills marketing a large tonnage of pulp in the Middle West and East.

Roger Egan, in charge of the Middle West for Bulkley Dunton, is spending the winter months in the New York office doing special statistical work. Through frequent trips into the Middle West Mr. Egan is keeping in touch with Bulkley Dunton customers as he has been doing out of his Chicago office. He will return to Chicago late in the winter or early in the spring.

Dexter Heads California Purchasing Agents

New president of the Purchasing Agents Association of Northern California, Inc., is Oakley W. Dexter, San Francisco, director of all purchases for the Crown Zellerbach Corporation.

Mr. Dexter began his paper experience as an office boy with the Crown Willamette Paper Company and now heads the purchasing department of the parent concern. Tis office supervises purchases at the Portland and Seattle offices of Crown-Zellerbach.

Mr. Dexter says he is about the last of the northern California "paper family" to become a president of the purchasing agents' body. Past presidents include Louis A. Colton, vice-president and director of purchases of the Zellerbach Paper Co., H. Lelend Weber, purchasing agent of Fibreboard Products, Inc., Arthur Silverstone, purchasing agent of The Paraffine Companies, Inc., and B. P. (Doc) Jaggard of the San Francisco office of the Hammermill Paper Co.

Jaggard was president when he was with the Schmidt Lithograph Company. He is now an honorary member.

OAKLEY W. DEXTER
Heads Purchasers

Lyman Smith Passes Away Suddenly

Death unexpectedly ended the successful career of Lyman M. Smith, general manager of the Inland Empire Paper Company of Spokane, Washington, at 6 a. m. October 31st. Cerebral hemorrhage was the cause and was attributed by his physician to overwork.

Mr. Smith, who was 46 years old, had been general manager of the Inland Empire Paper Company since March 1936 when the company was reorganized. He instituted a modernization program to increase efficiency and lower production costs. New products were introduced under Mr. Smith's supervision and he personally devoted a large amount of time to the sales of paper. Under his guidance the fortunes of Inland Empire were being successfully rehabilitated.

Upon learning of Mr. Smith's death, A. W. Witherspoon, president of the Inland Empire Paper Company, said:

"Lyman M. Smith was one of the best known men in the paper manufacturing business. His remarkable ability has been demonstrated by his achievement in taking the paper company out of a losing position and putting it into one where we have every reason to hope it will be profitable.

"His passing away is a great loss to the business community of Spokane and I feel I have lost a fine friend and valued associate."

Lyman M. Smith was born at Camden, New Jersey. He graduated in 1912 from the Worcester Polytechnic Institute at Worcester, Massachusetts and almost immediately was selected for an important position with the John Lang Paper Company at Philadelphia, now the Ruberoid Company.

After nine years there, Mr. Smith became assistant general manager of the Brompton Pulp and Paper Company in Quebec where he remained for six years. Then, for the next four years he was mill manager of the Crown Willamette Paper Company's specialty paper mill at Camas, Washington, which he left to take charge of the Cherry River Pulp and Paper Company at Westwood, West Virginia. Leaving this position Mr. Smith, accompanied by Mrs. Smith rested in Brattleboro, Vermont for several months before going to Spokane to take charge of the reorganized Inland Empire Paper Company in March 1936.

Mr. Smith possessed the ability to make friends quickly and to keep them throughout the years. He was always anxious to help a friend in need regardless of his own personal interests.

Besides his widow Mr. Smith is survived by his mother, Mrs. Edith Smith of Haddonsfield, New Jersey, and a brother, Sanford Smith of Brattleboro, Vermont. Burial was in Brattleboro.

Japanese Pulp Import Applications For 1938

Formal applications for 1938 imports filed with the Japanese government show increase over 1937 imports

Early in November Philip M. Crawford, acting district manager of the Seattle office of the Bureau of Foreign and Domestic Commerce, United States Department of Commerce, was informed by the office of the Commercial Attache in Tokyo that formal applications for the licensing of next year's imports of wood pulp had been filed with the Japanese Ministry of Commerce and Industry by both the rayon pulp and paper pulp associations of Japan.

The total applied for amounts to 734,000 tons, of which 400,000 tons were applied for by the Rayon Manufacturers Association and 334,000 tons by the Japanese Paper Manufacturers Association, it was reported.

The report stated that of the 400,000 tons of pulp applied for by the rayon manufacturers, 250,000 tons will be used in the manufacture of rayon and 150,000 tons in the manufacture of staple fiber.

The consumption of pulp in Japan was estimated by the Japanese Ministry of Commerce and Industry at 1,080,000 tons for paper making and 340,000 tons annually for the manufacture of rayon, it was also reported.

The domestic mills in Japan are in a position to supply about 810,000 tons of pulp for paper making and about 50,000 tons suitable for the manufacture of rayon according to the Tokyo press.

The Rayon Organon, published in New York, states that the average monthly rayon yarn production in Japan for the first seven months of this year averaged 27,000,000 pounds per month. If this rate continues, the Rayon Organon states, the 1937 Japanese rayon yarn production would total at least 325,000,000 pounds.

This 1937 total production would require about 330,000 metric tons of wood pulp (364,000 short tons), of which 280,000 metric tons (308,644 short tons) are imported and 50,000 metric tons (55,115 short tons) are produced domestically. It is understood, says the Rayon Organon, that pulp importations for 1938 will be allowed for 340,000 metric tons (374,782 short tons) for rayon pulp, which added to domestic production of 60,000 metric tons (66,138 short tons) for 1938, gives an available supply of 400,000 metric tons (440,920 short tons).

This pulp would allow a rayon (yarn plus staple fiber) production in 1938 of 750,000,000 pounds, a figure which the Japanese rayon and staple fiber industry will have the capacity to make.

Average monthly rayon production for the first seven months has been 27,000,000 pounds, indicating that the Japanese rayon yarn production for the present year would total at least 325,000,000 pounds.

Japanese Pulp Imports Being Maintained

The Bureau of Foreign and Domestic Commerce has released the following report from Tokyo:

Japan's foreign trade for the first 10 days of October showed a decline in practically all major export commodities and the majority of import items, except pulp, hemp, and sugar, according to a radiogram from the office of the American Commercial Attache at Tokyo, October 12. There was a sizeable export excess for the period, but the total unfavorable trade balance since the first of the year, amounting to 733,193,000 yen, is still considerably above the unfavorable balance of 191,368,000 yen recorded in the same period of 1936.

Prince Rupert Project Delayed

Frank L. Buckley, who has been negotiating for establishment of a 250-ton sulphite pulp mill at Prince Rupert for more than two years, says he is awaiting a favorable turn in the financial situation before launching the project.

"To attempt financing by bond issue now would be out of the question," said Mr. Buckley in Vancouver a few days ago. "The pulp market is sound enough, but money markets are too uncertain."

Meanwhile ratepayers of Prince Rupert passed by 98 per cent a by-law offering free site and free water over a term of years to the Buckley enterprise or any other bona fide pulp mill likely to establish in that city.

The company would probably obtain its power from Northern Electric Company.

Andrew Hawley Joins Supply Company

Andrew Hawley, who for the past several years has been in the technical department of the Crown Willamette Paper Company at Camas, Washington, has been appointed to the staff of the Pacific Coast Supply Company in charge of the Seattle office. Mr. Hawley took over his new duties early this month.

Port Angeles Host To Pacific TAPPI

November 9th dinner meeting featured Heller & Merz moving picture and paper on the Saunders valve

WHEN the chairman of a TAPPI dinner meeting estimates the number of those who will attend within a dozen of those who show up he is considered a good guesser, but Harold T. Fretz, chief chemist for Rayonier Incorporated, Port Angeles Division, and chairman of the dinner meeting held in that city November 9th, made a perfect score.

By applying the slide rule to his calculations chairman Fretz determined that 97 plates should be set on the tables at the Port Angeles Golf and Country Club and exactly 97 men showed up.

The program opened with the introduction of Arthur M. Mears, manager of the Pacific Coast Supply Company and William C. Marshall, Pacific Coast technical representative for Heller & Merz, manufacturers of paper dyestuffs. They presented the new Heller & Merz color motion picture, "Beyond the Rainbow," showing the manufacture of dyestuffs and basic chemicals from which dyestuffs are manufactured. The 300 acre plant of the Calco Chemical Company impressed those who saw it with its tremendous size and completeness. Heller & Merz is the paper mill dyestuff division of the Calco Chemical Company. They are represented on the Pacific Coast by the Pacific Coast Supply Company and Mr. Marshall is in charge of service work.

After the showing of the sound picture, which gave a complete description of the highly complex processes involved in the manufacture of even a simple dyestuff, Mr. Marshall gave a short talk on dyestuffs application to paper production. This talk in detail will appear in the December issue of PACIFIC PULP & PAPER INDUSTRY.

TAPPI chairman, George H. McGregor, called on H. A. Des Marais of the General Dyestuff Corporation and Roy S. Carey of the National Aniline & Chemical Company, each of whom spoke briefly on the growing public consciousness of color.

Bruce E. Hoffman, senior forester of the U. S. Forest Service in Portland, Oregon, was introduced by chairman McGregor. Mr. Hoffman spoke for a few minutes on "Timber Supply and Its Relation to the Forest Products Industry of Northwest Washington." Mr. Hoffman's remarks will appear in the December number of this journal.

Following Mr. Hoffman's talk Mr. McGregor asked those present to give thought to the problem of timber regrowth and to support reforestation work, for timber is the lifeblood of the pulp and paper industry.

Harold T. Fretz, chairman of the Port Angeles meeting was thanked for his fine work by chairman McGregor and given a vote of appreciation by those present.

N. W. Coster, vice-chairman of the Pacific Section of TAPPI, was introduced and spoke briefly on his trip to the Fall meeting of national TAPPI at Savannah, Georgia, October 18th to 20th.

Earl G. Thompson, former secretary-treasurer of the Pacific Section talked for a few minutes on the current question of transfer of forest recreation areas now supervised by the U. S. Forest Service from the Department of Agriculture to the National Park Service of Department of the Interior. Since trees are products of the soil, Mr. Thompson stated that the forest recreation areas are rightfully under the Department of Agriculture and he urged that they be left under the jurisdiction of that department. He suggested that members of the Pacific Section write their congressmen and senators urging them to vote for retention of the Forest Service jurisdiction when the transfer question arises at the coming special session of Congress.

Roger E. Chase presented an interesting and humorous description of the Saunders valve and its various applications to the pulp and paper industry. Mr. Chase's paper is presented in full in this number of PACIFIC PULP & PAPER INDUSTRY.

J. V. B. Cox, secretary-treasurer of the Pacific Section asked that those who wished to receive notices of the Pacific Section meetings give him their names and address and they would be put on the mailing list. Mr. Cox's address is Box 3939, Portland, Oregon.

Chairman McGregor outlined the several classifications of membership in TAPPI and urged that those present who are not already members join and obtain the maximum benefits of the work being done by the Technical Association.

He urged that as many as possible attend the meeting in Seattle December 3rd and 4th of the Pacific Coast Division of the American Pulp & Paper Mill Superintendents Association, and announced that the next dinner meeting to be held by the Pacific Section of TAPPI will be in Portland on the evening of January 11th, the place to be announced later.

The following men attended the TAPPI dinner meeting held in Port Angeles, November 9th:

HAROLD T. FRETZ
Chairman, Port Angeles TAPPI Dinner

Ray Austin, Washington Pulp & Paper Corporation; Jerry Alcorn, Pulp Division, Weyerhaeuser Timber Co., Everett; L. D. Blodgett, U. S. Forest Service, Port Angeles; Clarence Bunge, Crown Zellerbach Corp., Port Townsend Div.; J. R. Bruckart, U. S. Forest Service, Olympia; T. H. Beaune, Fiberboard Products, Inc., Port Angeles.

C. V. Basom, Fibreboard Products, Inc., Port Angeles; J. H. Beaver, Central Engineering Department; Paul W. Blatter, Rayonier, Inc., Port Angeles Div.; D. Earl Baker, Crown Zellerbach Corp., Port Townsend Div.; Jim Brinkley, James Brinkley Company, Seattle; Eugene Browning, Rayonier, Inc., Shelton Division.

B. A. Bannan, Western Gear Works, Seattle; Everet A. Carlson, Rayonier, Inc., Port Angeles Div.; J. V. B. Cox, Hercules Powder Co., Portland, Ore.; W. C. Crait, Rayonier, Inc., Port Angeles Div.; George A. Canfield, Rayonier, Inc., Port Angeles Div.; N. W. Coster, Soundview Pulp Company, Everett.

R. S. Carey, National Aniline & Chemical Co., Portland, Oregon; E. J. Cavanaugh, Fibreboard Products, Inc., Port Angeles; Walter J. Clough, Pulp Division, Weyerhaeuser Timber Co., Everett; Henry V. Charnell, Jr., Rayonier, Inc., Port Angeles Div.; John M. Carlson, Soundview Pulp Company, Everett; R. E. Chase, R. E. Chase & Company, Tacoma.

E. F. Drake, Crown-Zellerbach Corp., Port Townsend Division; R. E. Drane, St. Helens Pulp & Paper Co., St. Helens, Oregon; H. A. Des Marais, General Dyestuff Corporation, Portland, Oregon; George E. Durkee, Shaffer Pulp Co., Inc., Tacoma; Girard C. Eck, Rayonier, Inc., Shelton Division; V. A. Floberg, Central Engineering Office, Port Angeles.

H. F. Fretz, Rayonier, Inc., Port Angeles Div.; H. M. Gustafson, General Electric Co., Seattle; Howard C. Graham, Washington Pulp & Paper Corp.; William R. Gibson, Shibley Co., Seattle; Fred G. Hurst, Central Engineering Office, Port Angeles; B. E. Hoffman, U. S. Forest Service, Portland, Oregon.

Luke R. Hadnot, Charlotte, N. C.; E. J. Hanzlik, U. S. Forest Service, Olympia; R. W. Halbert, Rayonier, Inc., Port Angeles Div.; N. O. Hartnagel, Fibreboard Products, Inc., Port Angeles; Wm. S. Hodgson, Fibreboard Products, Inc., Port Angeles; R. S. Hanchett, Fibreboard Products, Inc., Port Angeles.

H. M. Jones, Seattle; Geo. H. Krueger, Rayonier, Inc., Port Angeles Div.; J. K. Kieburtz, Rayonier, Inc., Port Angeles Div.; Glen D. King, Washington Pulp & Paper Corp.; M. E. Kinsey, Rayonier, Inc., Shelton Division; John M. Kjome, Scientific Supplies Co., Seattle.

A. H. Lloyd, Crown Zellerbach Corp., Port Townsend Division; Ralph P. Lungreen, Soundview Pulp Company, Everett; Don Lawson, Rayonier, Inc., Port Angeles Div.; Ralph Lawrence, Fibreboard Products, Inc., Port Angeles; N. A. Lewthwaite, Crown Zellerbach Corp., Port Townsend Div.; C. T. Mulledy, Rayonier, Inc., Port Angeles Div.

W. A. McKenzie, Rayonier, Inc., Shelton Division; G. H. McGregor, Pulp Division, Weyerhaeuser Timber Co., Longview; J. W. Martin, Schorn Paint Mfg. Co., Seattle; A. M. Mears, Pacific Coast Supply Co., Portland; Wm. E. Marshall, Heller & Merz Corp., Portland; E. Clair McCormick, Washington Pulp & Paper Corp., Port Angeles.

J. H. McCarthy, Soundview Pulp Co., Everett; Fred Nicholson, Stetson-Ross Machine Co., Seattle; Herbert Oliver, General Electric Supply Corp., Seattle; Fred Radke, Rayonier, Inc., Port Angeles Div.; H. H. Richmond, Electric Steel Foundry, Portland; Ed Riley, Palmer Supply Co., Seattle.

E. D. Rich, Rayonier, Inc., Port Angeles Div.; Otto H. Sangder, Rayonier, Inc., Grays Harbor Div., Hoquiam; P. E. Sullivan, Ingersoll Rand Co., Seattle; W. O. Stevens, Central Engineering Office; P. S. Simcoe, Crown Zellerbach Corp., Port Townsend Div.; E. C. Sherman, Crown Zellerbach Corp., Port Townsend Div.

George F. Sherrill, Seattle; Brian Shera, Pennsylvania Salt Mfg. Co. of Washington, Tacoma; H. A. Sprague, Rayonier, Inc., Port Angeles Div.; Winston Scott, Rayonier, Inc., Shelton Division; Glenn Simkins, Rayonier, Inc., Port Angeles Div.; Harlan Scott, Pacific Pulp & Paper Industry, Seattle.

H. N. Simpson, Crown Zellerbach Corp., Port Townsend Division; Cecil L. Triplett, Hawley Pulp & Paper Co., Oregon City, Oregon; Earl G. Thompson, Great Western Electro-Chemical Co., Seattle; Robert S. Tabke, Rayonier, Inc., Shelton Division; F. K. Van Etten, Port Angeles; R. O. Vognild, Hooker Electrochemical Co., Tacoma.

W. A. Veech, Central Engineering Office, Port Angeles; J. V. Venables, Washington Pulp & Paper Corp., Port Angeles; Henry E. Weller, Rayonier, Inc., Port Angeles Div.; Stewart H. White, City of Port Angeles; F. W. Whitney, Central Engineering Office, Port Angeles; Borden Wilbor, Crown Zellerbach Corp., Port Townsend Div.

L. H. Wear, Taylor Instrument Co., Portland, Oregon; W. T. Webster, St. Regis Kraft Co., Tacoma; James W. Wenger, Washington Pulp & Paper Corp., Port Angeles; Samuel Weiss, Vaughan Motor Co., Portland; N. T. Widman, Rayonier, Inc., Port Angeles Div.; Leonard Ziel, Port Townsend Div., Crown Zellerbach Div.

West Linn Adds Pulp Dryers

Twelve additional dryers are being installed on the pulp drying machine at the Crown Willamette Paper Company's West Linn mill. This brings the machine's capacity up to about 40 tons per day. The unit replaces the former method of lapping and baling for shipment.

Fibreboard Making Improvements at Vernon

The southern board division of Fibreboard Products, Inc., at Vernon, Los Angeles, has shut down No. 2 board machine for extensive rebuilding. Among the improvements is the addition of a Ross vapor absorption system.

Grant Farmer, superintendent returned to the plant in early November, after completing a tour of mills in the southern states.

Puget Sound Construction Continues at Fast Rate

Construction of the Puget Sound Pulp & Timber Company's new unbleached sulphite pulp mill at Bellingham, Washington is progressing ahead of schedule with 650 men working three shifts under the direction of Cavin, Marshall & Barr, consulting engineers.

Concrete foundations for the mill, which will produce 125 tons per day, were completed and backfilling practically done by November 15th. All work from that date on is to be above the ground.

To provide sufficient water for the new unit the city of Bellingham is rushing work on a new pipeline. A control dam is now being built at Lake Whatcom and construction is ahead of schedule. It is expected the dam will be completed by January 15th.

Sihtola Studies Coast Methods

Henry Sihtola, assistant superintendent of the Ahlstrom mill at Warkaus, Finland left for home October 28th after a five weeks visit on the Pacific Coast where he studied methods employed in several sulphite pulp mills.

Mr. Sihtola planned to visit other mills in Eastern United States and Canada, arriving home in January after spending Christmas in London.

George Pusey Dies at Oregon City

George E. Pusey, retired superintendent of the Hawley Pulp & Paper Company of Oregon City, died suddenly in that city October 26th at the age of 67 years. Mr. Pusey had been a resident of Oregon City for 45 years.

Ocean Falls To Add Dryers

Some time after the first of the year, new dryers will be placed on No. 4 machine at Pacific Mills, Ltd., plant at Ocean Falls. The old dryers will be used with a Kamyr unit to form a pulp drying machine. Another improvement scheduled for about the same time is the addition of a new Tomlinson furnace.

NINETY-SEVEN MEN attended the Dinner Meeting of the Pacific Section of TAPPI, held at the Port Angeles Golf & Country Club, November 9th » » » This was the third successful dinner meeting held in Port Angeles.

Coast Men Attend Savannah Meeting

THE Fall meeting of TAPPI, held October 18th to the 21st at Savannah, Georgia attracted nearly nine hundred men and women including a number from the Pacific Coast.

Those making the long trip to Savananh from this section of the country included LAWRENCE KILLAM, president of the British Columbia Pulp & Paper Company of Vancouver, B. C., accompanied by Mrs. Killam; JAMES P. V. FAGAN, superintendent of the Puget Sound Pulp & Timber Company's Anacortes pulp mill, and Mrs. Fagan; ALBERT BANKUS, vice-president of the Crown Zellerbach Corporation; N. W. COSTER, technical director of the Soundview Pulp Company of Everett, Washington; HERMAN L. JOACHIM of San Francisco; J. V. B. COX, engineer of the Paper Makers Chemical Division of the Hercules Powder Company, whose headquarters are in Portland, Oregon LAWRENCE K. SMITH, manager of PACIFIC PULP & PAPER INDUSTRY; and WALTER CLIFFORD of Pennick and Ford, whose home is in Tacoma.

There were two recent ex-westerners at Savannah, Maurice Phelps and Walter Bain, both formerly located at Camas.

The representatives of the Pacific Coast industry who attended found the Southerners most hospitable. They were welcomed at several of the new pulp and paper mills in and adjacent to Savannah. They discovered that there is a feeling in the South that this great development of the past several years is not only an economic matter but a patriotic step as well. The belief was prevalent that the South should contribute its share toward making the United States less dependent upon foreign sources of wood pulp.

The technical paper program which was published in the October number of this journal was of interest to the visitors from the Pacific Coast, particularly that part dealing with the available supply and cost of pulpwood in the South and also the paper and discussion on the acid pulping of Southern pine.

Visit Hercules Operations

On October 21st, after the convention had closed in Savannah, the Hercules Powder Company was host to over four hundred on an all day trip to Brunswick, Georgia, where Hercules has one of its large naval stores plants. This most interesting trip was arranged and supervised by Theodore Marvin, advertising manager of the Hercules Powder Company. Hercules provided a special train from Savannah to Brunswick. After breakfast buses took the guests to the Hercules plant where they saw the production of turpentine, pine oil, rosin and other products from the Southern pine stumps and top wood.

The guests were then taken to the famous Cloister Hotel on Sea Island for luncheon, provided by Hercules. The afternoon was spent with golf and swimming. The large number of the visitors at the TAPPI convention who accepted the hospitality of Hercules were warm in their praise of the day's program which was highly interesting and most enjoyable, and they commented upon the smoothness with which the program was carried out.

J. V. B. Cox of the Hercules Powder Company's Portland, Oregon Paper Makers Chemical Division plant, was present and assisted in making the day a pleasant one.

The visitors from the Pacific Coast returned to their homes after the meeting in Savannah and the visit to Brunswick with a better knowledge of the South and a feeling of real appreciation for those who made the convention a success.

TAPPI CONVENTION VISITORS, to the number of 400 visited this large naval stores plant of the HERCULES POWDER COMPANY at Brunswick, Georgia, as guests of the company.

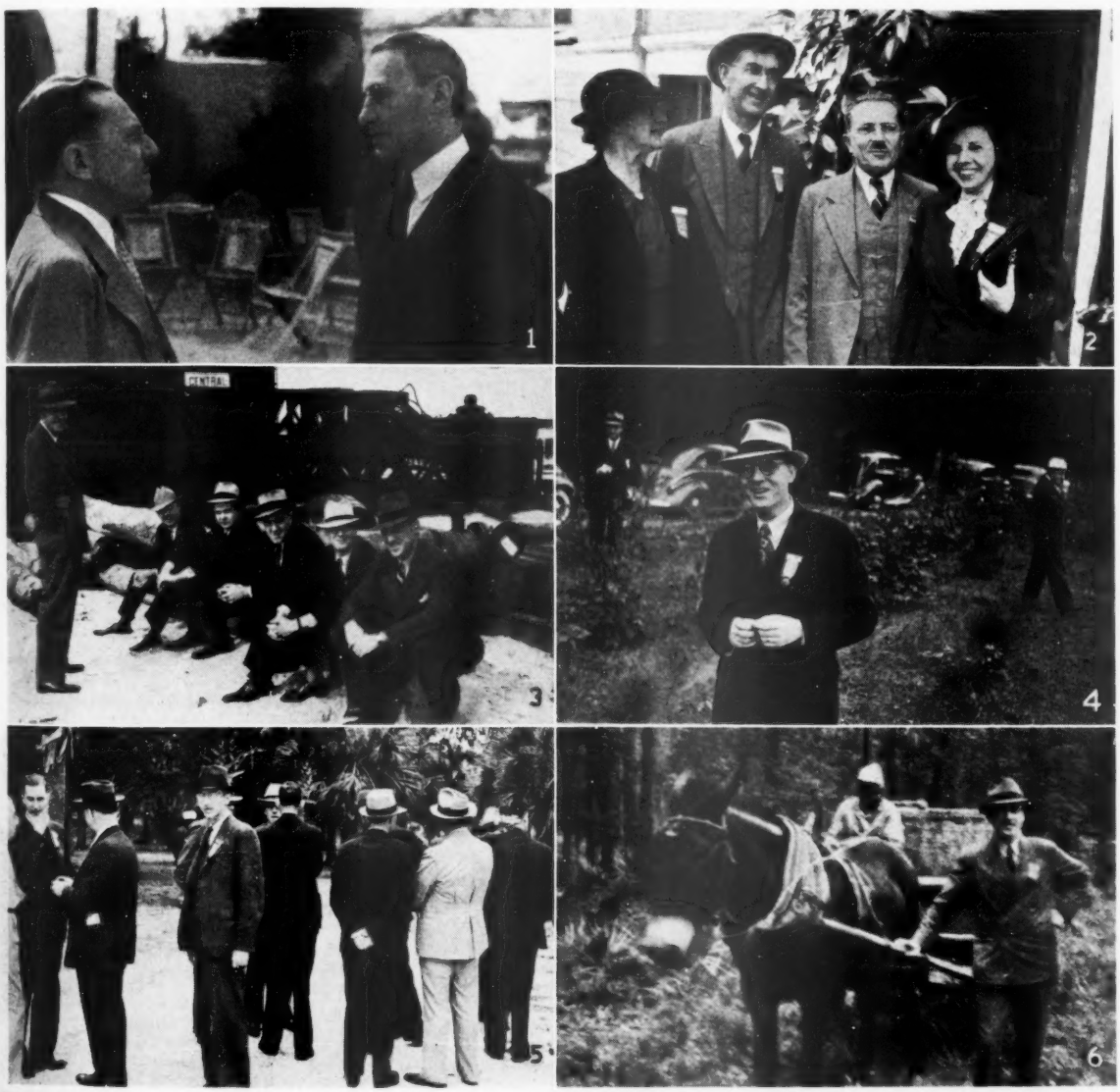
University Obtains Federal Pulp Grant

It was announced on November 11th by United States Senator Lewis B. Schwellenbach of Washington that President Roosevelt has designated as eligible the sum of $11,328 from Works Progress Administration funds for "construction of an experimental pulp and paper mill, including necessary auxilliary machinery and equipment for use by the University of Washington in investigating and studying the availability and commercial evaluation of Douglas fir for pulp production."

This grant will enable the Department of Chemistry at the University of Washington under Dr. Henry K. Benson, executive officer, to enlarge the scope of its pulp laboratory in the new chemistry building, dedicated October 27th.

For several years the Department of Chemistry has perfomed fundamental research on the pulping of Douglas fir in an effort to find a commercially feasible process to utilize this largest of the Pacific Northwest wood species. Much progress has been made but lack of equipment and funds with which to purchase the needed equipment has prevented further study. The government grant through the WPA will permit further research work.

Although Douglas fir is today employed in varying quantities in both the soda and sulphate processes it is felt desirable to find a modification of the sulphite process which will successfully pulp the resinous Douglas fir. According to Dr. Kenneth A. Kobe, professor of chemical engineering at the University of Washington, who is in charge of the construction of the experimental equipment the laboratory, when completed about June 1st, 1938, will stress work on producing high grade and rayon pulps from Douglas fir.



WESTERNERS AT THE TAPPI MEETING IN SAVANNAH, October 18th to 21st included, No. 1, OTTO C. SCHOENWERK, consulting engineer who designed and built several Pacific Coast plants and who is now supervising the construction of the Brunswick Pulp & Paper Company bleached kraft mill at Brunswick, Georgia, talking to HAROLD R. MURDOCK, research director of the Champion Fibre Company » » » No. 2, Mr. and Mrs. LAWRENCE KILLAM with Mr. and Mrs. MURDOCK. Mr. Killam is president of the British Columbia Pulp & Paper Company » » » Mr. and Mrs. Murdock, who attended the national TAPPI convention in Portland in 1934, have many friends in the Pacific Coast industry.

No. 3, Waiting for the tour through the Brunswick mill, from right to left, FRED SHANEMAN, manager of the Pennsylvania Salt Mfg. Co. of Washington, Tacoma; N. W. COSTER, technical director of the Soundview Pulp Company of Everett, and MAURICE PHELPS, who recently left the Crown Willamette Paper Company Division of the Crown Zellerbach Corporation at Camas to join the Solvay Sales Corporation in Syracuse.

No. 4, WALTER BAIN, who left Camas a few months ago to join the Glidden Company » » » No. 5, J. V. B. (VAN) COX of the Paper Makers Chemical Division of the Hercules Powder Company, Portland, who turned around in time to be snapped » » » No. 6, FRED SHANEMAN and "friends."

Puget Sound Report Reflects Progress

First balance sheet since completion of financing for new Bellingham pulp mill shows ratio of current assets to current liabilities of nearly 2½ to 1

The first balance sheet of the Puget Sound Pulp & Timber Company of Bellingham giving effect to the recent financing for the company's new pulp mill, was recently released by President Ossian Anderson.

Showing current assets of $850,391.42 against current liabilities of $348,267.50, the September 30th balance sheet reflects a ratio of current assets to liabilities of nearly 2½ to 1.

Following is the balance sheet as released by the company:

PUGET SOUND PULP & TIMBER CO.
(and Subsidiary Companies)
Consolidated Balance Sheet
September 30, 1937

ASSETS:			LIABILITIES:		
Fixed Assets:			**Capital:**		
Land, Timber, Machinery and Equipment, Railroads, Etc.		$3,699,757.29	**Preferred Stock**		$2,500,000.00
			Non-Par Common Stock		2,497,920.00
			Capital Surplus		432,814.54
			Earned Surplus		221,006.62
Cash on Hand for New Construction		2,225,516.26	**New Construction Contracts and Accounts Payable**		896,515.21
Construction Work in Progress		1,170,998.95	**Contracts Payable—Due After One Year**		20,333.34
Current Assets:			**Current Liabilities:**		
Cash	$226,611.27		Accounts and Contracts Payable	$221,116.40	
Accounts Receivable	264,617.22		Accrued Taxes	28,668.35	
Inventories	341,548.38		Normal Income Tax Accrued	60,900.00	
Prepaid Expenses	17,614.55		Dividends Payable	37,582.75	
		850,391.42			348,267.50
Advanced Railway Construction and other Deferred Debits		116,143.96	Reserve for Depreciation		956,507.37
			Reserve for Depletion		189,443.30
Total		$8,062,807.88	**Total**		$8,062,807.88

Camas Pulp Dryer Operating

A pulp drying machine has been installed at the Camas mill of the Crown Willamette Paper Company, and starting production late in October. The wet end is a Kamyr unit, with Ross hood, vapor absorption system and exhaust.

The dryer is turning out about 50 tons per day of dry sulphite pulp, ready for shipment in place of lapped and baled pulp. Part of this production goes to the Carthage, N. Y., plant, the remainder being sold to other markets.

Sam Salmonson Back on Job

Sam Salmonson, assistant superintendent of the Soundview Pulp Company at Everett, Washington, returned to work at the end of October after nearly two months absence.

Mr. Salmonson's neck and shoulders were severely strained in an automobile accident near Kelso, Washington. It was necessary for him to remain in bed while recovering from these painful injuries, but he has now almost entirely recovered and is back on the job.

Carl Richter Visits Stebbins Customers

Carl F. Richter of Watertown, New York, president of the Stebbins Engineering & Manufacturing Company and of the company's Pacific Coast subsidiary Stebbins Engineering Corporation of Seattle, made his first visit to the Coast since last February early in November.

Mr. Richter attended the TAPPI Fall meeting in Savannah in October, returned to Watertown for a few days and then came direct to the Pacific Coast where he has been inspecting the large amount of recent Stebbins work accompanied by A. S. Quinn, manager of the Stebbins Engineering Corporation.

The high level of sulphite pulp production during the present year, coupled with new construction and modernization work has kept the Stebbins organizations exceptionally busy, Mr. Richter stated. The year's work has embraced all of the several types of lining work done by Stebbins.

Stockwell and Audley Come West

Burt. G. Stockwell, president, and B. A. Audley, secretary-treasurer of the Lockport Felt Company of Newfane, New York, met their company's Pacific Coast representative, Alan C. Dunham, in Spokane November 8th and then proceeded to visit a large number of mill customers from the Canadian line to Los Angeles.

Mr. Audley visited the Pacific Coast two years ago but this is Mr. Stockwell's first trip. From Los Angeles Mr. Stockwell and Mr. Audley will return directly to Newfane which is ten miles north of Lockport, New York.

Attempt to Settle Envelope Problems

A number of independent consumer envelope factories in southern California have retained the services of the Biddle Trade Bureau in the hope that conditions in the manufacturing of envelopes in southern California may receive the benefit of this agency.

Albany Felt Shows Film in Everett and Tacoma

The Albany Felt Company's sound moving picture, "The Art of Felt Making," was shown by Harry H. Stilwell, Pacific Coast representative, at a dinner given by the company in Everett November 11th.

About a hundred men from the Everett Pulp & Paper Company, the Soundview Pulp Company and the Pulp Division of the Weyerhaeuser Timber Company were guests and after viewing the picture participated in the lively discussion of felts and their use which followed.

Mr. Stilwell had just returned a few days before from a five weeks trip which included three weeks at the company's plant in Albany, New York.

"The Art of Felt Making" will next be shown to the members of the Pivot Club of the Fibreboard Products, Incorporated mill of Sumner, Washington, at their regular monthly dinner which will be held November 18th at the Hotel Winthrop in Tacoma.

Pioneer-Flintkote Completes Expansion Program

With 50 years experience, first in the manufacture of roofing papers and later in the production of patent coated and chip boards, Pioneer Division, The Flintkote Company embarks upon the production of corrugated fibre containers in a new Los Angeles plant

THE expansion program of the Pioneer Division, The Flintkote Company at its Los Angeles plant which was launched early this year is now completed. This development represents an investment of $1,000,000 and with the substantial increase in production capacity which it means for the plant places it among the leaders in its field.

Observing its fiftieth anniversary next year, the Pioneer Division, the Flintkote Company, long an established factor in the manufacture of roofing materials, expands its production lines in this new development with the addition of the manufacture of corrugated containers.

The additions to the plant comprise five: an addition to the chip and boxboard warehouse, expansion of the beater room, a new paper stock preparation room, a new paper mill and the new corrugated container plant.

With the completion of the project 125 men have been added to the payroll, representing an increase in the annual wages paid by the firm of $225,000.

● The new paper mill is housed in a reinforced concrete building comprising 26,104 square feet of floor space. Here is installed No. 2 machine, a modern Black-Clawson board machine with a 114 inch trim for the rapid production of folding boxboard and corrugated test liner. The paper machine is 210 feet long.

Located in a semi-arid country as is this plant, the problem of water is different from that found in the northern areas where water is so plentiful. Water is supplied by wells put down on the grounds of the factory. There are four wells. Two of these are used and supply 1,440,000 gallons every twenty-four hours. Both No. 1 and No. 2 machines are now using the same water supply that was used previously on No. 1 machine alone. This is a result of the installation of a water clarification system.

For water conservation and fiber recovery, a special white water clarification system, has been installed. At present it is handling 600 gallons per minute, but under necessity can handle considerably more.

A new breaker-beater and pulper-refiner, manufactured by the Shartle Brothers Machine Company, have been installed in the expanded beater room which now has a floor space of 10,380 square feet. The jordans and agitator stock pumps, also

NEW BUILDINGS erected by PIONEER DIVISION, THE FLINTKOTE COMPANY in Los Angeles as part of the recently completed expansion program.

J. D. BEATTY (at the right), Paper Mill Superintendent of the PIONEER DIVISION, THE FLINTKOTE COMPANY, Los Angeles, talking over a problem with his assistant GLEN PHILLIPS.

made by the Shartle Brothers Machine Company, are also located in this room.

The new corrugated container plant, which comprises a floor space of nearly 50,000 square feet, is set up to make A and B flute, single faced, double backed, double double board, and containers of all sizes. It is equipped with a 64-inch corrugating machine, a 104-inch creaser and scorer, and a 50-inch printer and slotter. Other machinery in this plant consists of an automatic taping machine, and a hand taper. Ample space is provided for storage and a sizeable landing dock for shipping.

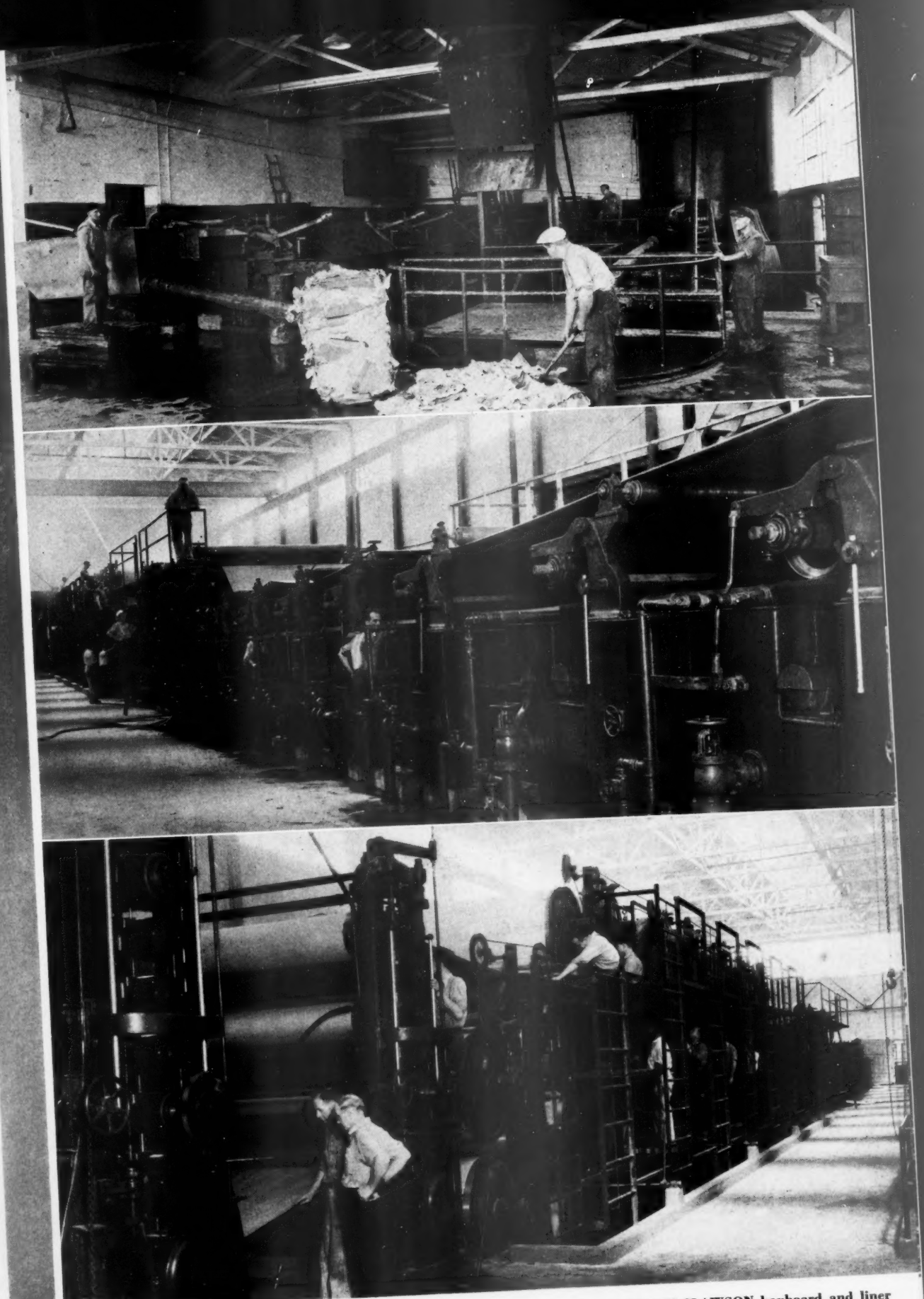
● The additions to the chip and boxboard warehouse increased the total floor space more than 25,000 square feet. It will be used to store patent coated boards. Construction of this building will permit the addition of a second story when future growth requires it.

The rapid growth of Flintkote's business in the Pacific coast territory has necessitated this expansion program. The project has been under the direction of L. M. Simpson, general manager of the Pioneer Division, the Flintkote Company. The corrugated box and chipboard division is under the supervision of A. E. Carlson. W. A. Kinney is production manager and is assisted by J. D. Beatty, superintendent of the paper mills, H. O. Willoughby, superintendent of the corrugating plant, S. E. Perkins, chief mechanical engineer, and H. B. Will, chief engineer.

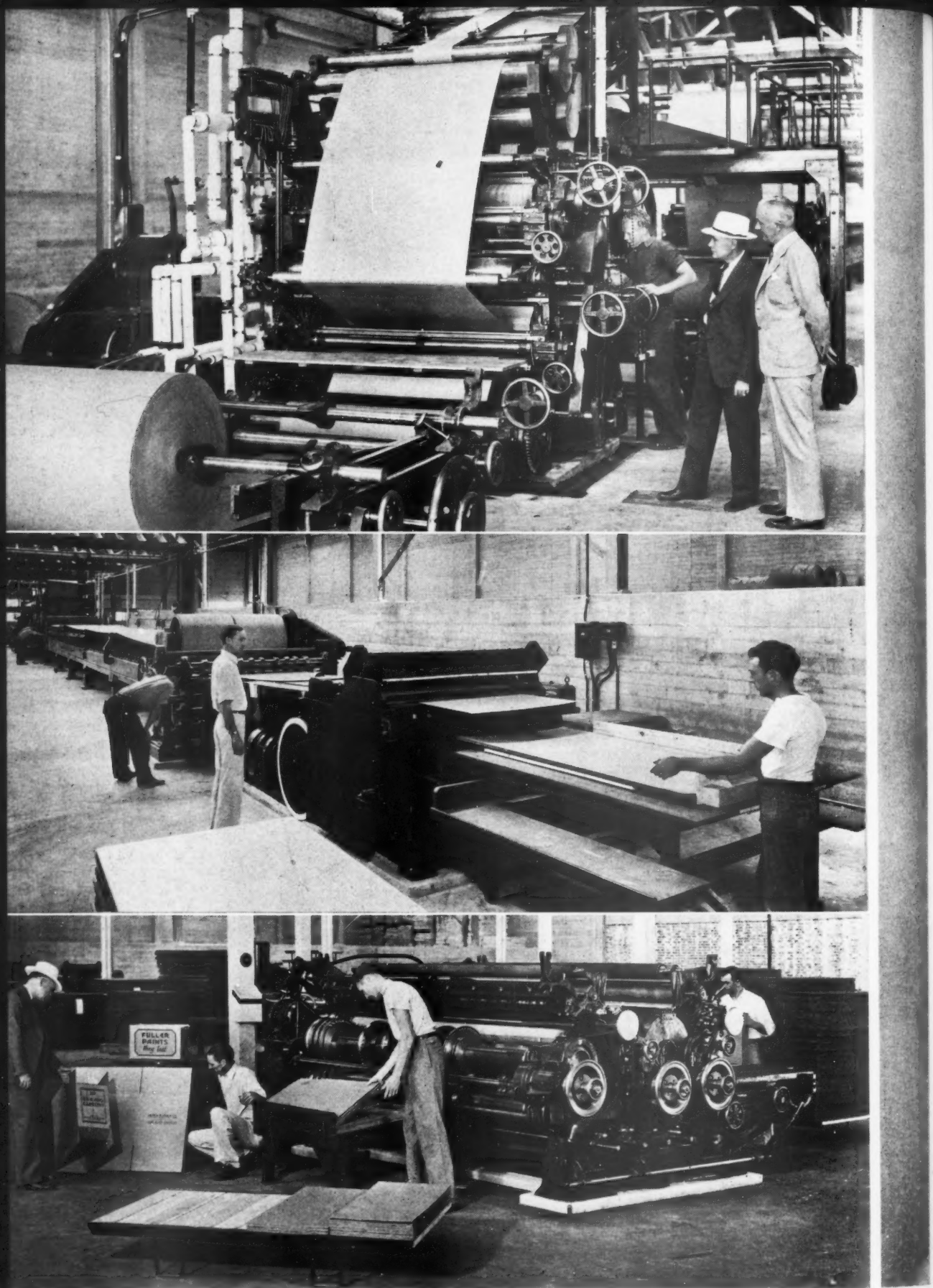
Pulp used by the company is obtained from mills in the Pacific Northwest and from foreign producers.

In a broadside announcement sent out by the company upon the completion of the new plant it is stated that, "Pioneer-Flintkote has the facilities to produce tough, durable and economical corrugated shipping and display containers, corrugated board in sheets, and single faced corrugated in rolls.

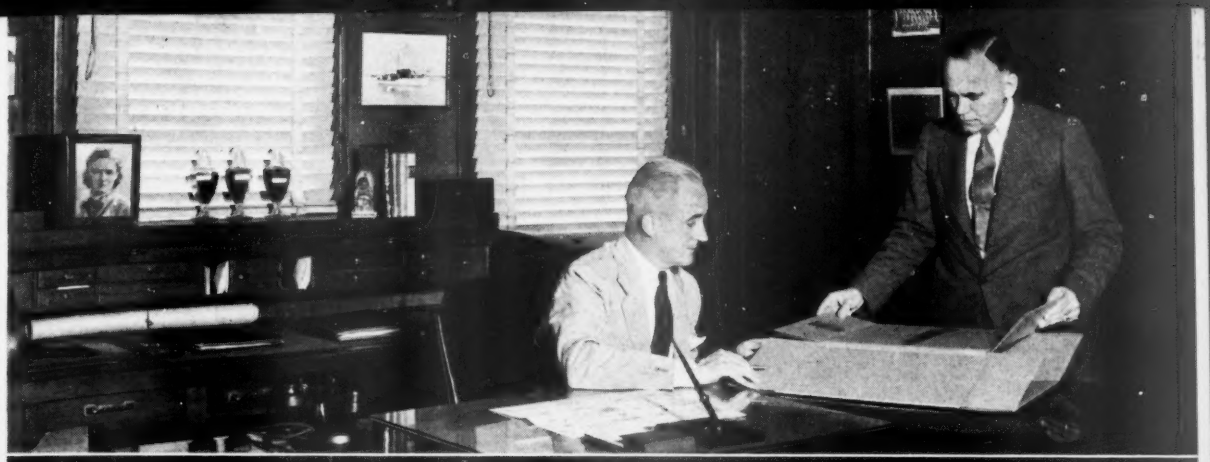
● "Pioneer-Flintkote — backed by the merchandising and manufacturing experience of a half-century old organization — also offers those other features so important to good merchandising and shipping.... SERVICE—deliveries promptly on schedule ... DESIGNING—by expert, experienced container designers ... ART—to perfect the layout and color arrangement of the trade name and sales message, complementing the designing to create the ideal corrugated container for merchandise."

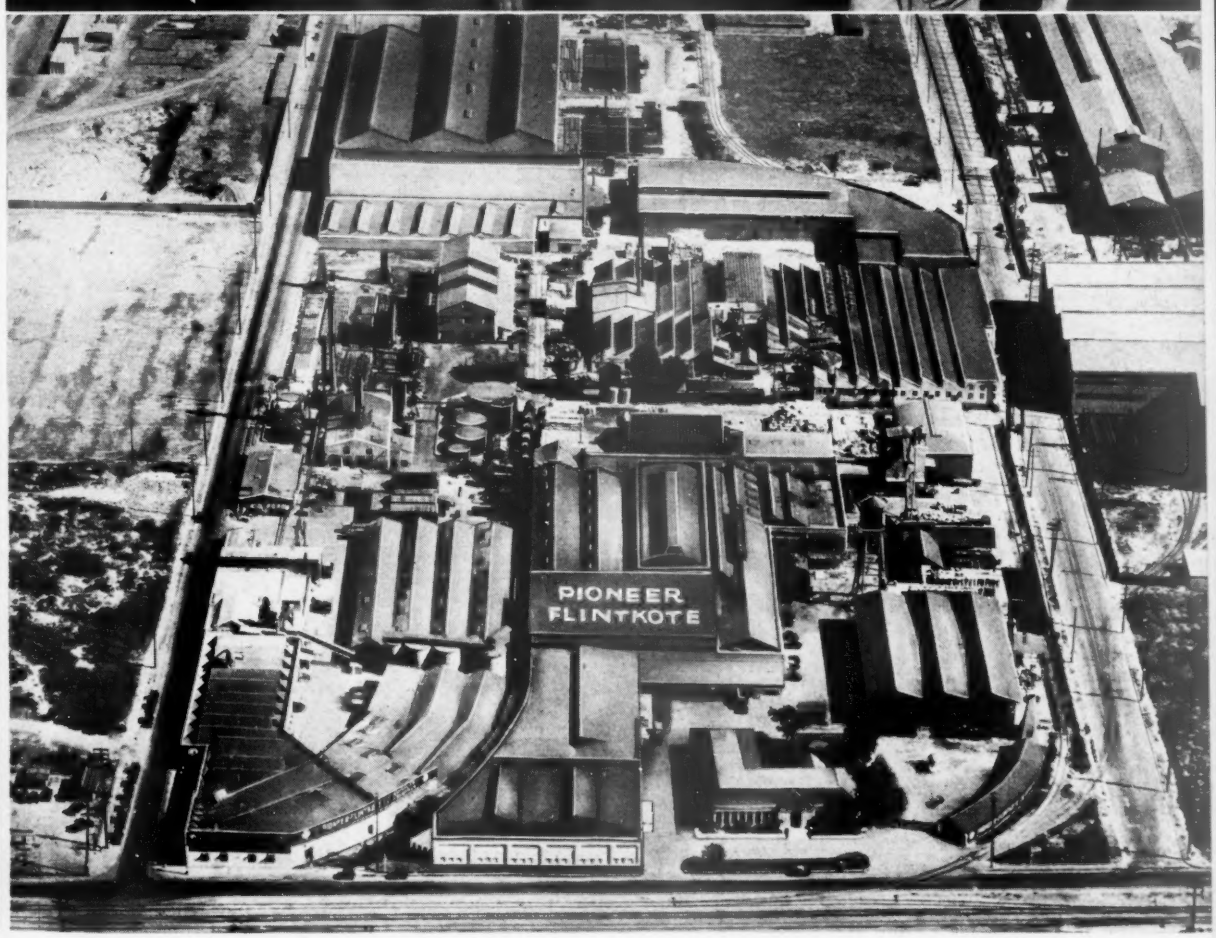


At top, waste paper stock going into SHARTLE Breaker Beater » » » In center, the new BLACK-CLAWSON boxboard and liner board machine, wet end » » » At the bottom, vertical dryer and calendar sections of the new board machine in the PIONEER-FLINTKOTE board and roofing mill in Los Angeles.



At the top, the new double deck, corrugating machine for the production of A and B flute corrugated board 65 inches in width » » » The 65 inch double facer 145 feet in length with continuous traveling cut-off appears in the center » » » At the bottom is a picture of the new 105 inch, 2-color printer and slotter employed in the manufacture of corrugated containers.





At the top is General Manager L. M. SIMPSON (seated) and A. E. CARLSON, Manager of the Corrugated Divison of PIONEER DIVISION, THE FLINTKOTE COMPANY in Los Angeles » » » In the center picture, left to right, WILLIAM ZEITZ, Assistant engineer; G. C. BROWN, Superintendent Roofing Division; H. B. WILL, Chief Engineer; S. E.. PERKINS, Chief Mechanical Engineer; and WILLIAM A. KINNEY, Production Manager » » » Airview at the bottom shows the PIONEER DIVISION, THE FLINTKOTE COMPANY, plant and offices, at 55th and Alameda in Los Angeles.

The Saunders Valve In the Pulp and Paper Industry

by R. E. CHASE*

THE Pulp and Paper Industry is a gimme-girl who has never hesitated from borrowing ideas or processes from other industries; like mining, for example, where she got tube-mills, ball-mills, shaking screens, and the sulphur roasting furnace. Now she has reached half way round the world to the deep gold mines of South Africa to fall for the Saunders valve, and fall hard. Did she fall, you ask, or was she pushed? Well, maybe not pushed exactly, but no doubt she has been subjected to a bit of persuasion or, one might say, a course of constructive enlightenment.

This man Saunders was a mine mechanic who lay awake nights trying to hatch out a valve that would hold air. His problem was to deliver air deep underground to the working faces of his mines with enough pressure to run the drills. But he had too many branch lines whose valves wouldn't shut tight, and too many valves with leaky packing glands. So he finally brought out this valve whose rubber-to-metal seating can be depended on to shut tight, even in the presence of scale and grit, and whose construction eliminates stem packing entirely and, of course, thereby eliminates stem leaks.

The Saunders valve is still a wonderful air valve, as is witnessed by the 700-800 which take part in the construction of Grand Coulee and Bonneville dams. When about a third of your air compressors are busy pumping air out through leaks, and the Saunders valve comes along and eliminates the leaks and cuts one-third off your compressed air costs, why (in anybody's language), you've got something! But the pulp and paper industry has been so busy adapting Saunders valves for handling stock, bleach, water and various chemicals that such a simple, but none-the-less important, job as handling air has been very considerably overlooked, except in a couple of plants where attention happens to be focused on compressed air costs.

*R. E. Chase & Company, Tacoma, Washington. Presented at the dinner meeting of the Pacific Section of TAPPI, Port Angeles, Washington, November 9, 1937.

● What, then, is a Saunders valve? Well, if a gate valve is a sliding damper, and a globe valve is a cup that presses down over an orifice, and a plug valve is a stopper with a hole in it, then a Saunders valve may be classified as a glorified pinch-cock. You take a piece of pipe and bend it across your knee to form a transverse kink or wrinkle like this. Then you cut a round hole opposite the wrinkle and paste a patch of adhesive tape over the hole, and you have a rudimentary Saunders valve. You press the patch down against the wrinkle with your thumb and the valve is closed; you release the thumb and the valve opens.

Well, what good is it?

The business of closing tight in spite of suspended solids has already been mentioned. You see, any bit of scale, or grit, or fiber which gets caught between the seat or weir and the diaphragm sinks right into the soft diaphragm material without preventing a tight closure. This makes it a great valve for pulp stock, suspensions of lime, and all kinds of sludges. The railroads even use this valve for sand for sanding rails. You have all sworn at gate valves, which get a pocket full of sediment preventing the gate from seating, or which have worn loose; or at globe valves with a rough or obstructed seat. Here is a valve that doesn't even pretend to have a smooth, machined seat, and doesn't care if foreign matter sticks right on the seat. That is, within reason. We have a mill where they tried to put hot lime sludge containing large jagged chunks of unburned lime rock through our valve.

● The Saunders valve has been a godsend for makers of these new grades of very free stock which go into rayon, etc. Here is a valve which shuts off tight, and will not let the water strain out and leave a solid plug of stock in the pipe. And if you do get a plugged pipe from any other cause, you can take off the bonnet of the Saunders valve and get in there with a hose, or a wire, or one of those plumber's snakes and clean it out without tearing the line down.

We have also mentioned that there is no valve-stem packing to leak. The valve doesn't have and doesn't need any packing, and doesn't need any grinding of seat and disc. It doesn't spend half its life in the shop. About the only service it ever needs is a shot of oil and an occasional new diaphragm; and it stays right in place in the pipe line for these simple attentions.

You will also note that the diaphragm separates the working parts of the valve from the line. You don't have to worry about a rusty, greasy slug of corruption dropping out of the bonnet without warning, to ruin a chest full of nice, bleached stock.

● Your attention is also called to the neat streamline flow through the valve. This makes for low pressure drop. In fact, the pressure-drop curve of a Saunders valve lies between that of a gate and a globe, clear over next to the gate curve.

There is another interesting feature in this valve which you might not think of at first. All other kinds of valves have a rubbing, scraping, or twisting action between seat and disc. This rubbing, of course, leads to wear and leakage. But it also

ROGER E. CHASE
"Selling Valves is Fun"

means loss of corrosion resistance. Corrosion resistance is generally the result of the formation of an insoluble protective coating on the surface of the metal, and this grinding action between seat and disc scrapes off this protective film and exposes fresh metal to corrosion. Pure metals such as iron, nickel, chromium, copper, lead, zinc, aluminum, and magnesium oxidize so rapidly in air, and liberate so much heat in the reaction that they burn furiously when arrangements are made to keep the oxide out of the way. There is the well-known case of the tubular air preheater in Portland which caught fire and burned up to the tune of $25,000. and hardly left a bushel of ashes. What I am trying to point out is the importance of maintaining the protective film of oxide on the surface of these metals. If an insoluble film can be maintained, corrosion will stop or at least be very slow. Now, in the Saunders valve, there is none of this grinding, scraping, or twisting action between disc and seat. Instead, we have simply a flexible diaphragm which presses straight down on the weir. If there is a protective film, it is not disturbed. This leads to the general rule that we can recommend the same cheap metal for the Saunders valve as has proven good enough for the pipe line itself. For example, if cast iron is good enough for the pipe in any given service, there should be no necessity of using a bronze or stainless valve.

The Saunders valve, fortunately lends itself very readily to various methods of remote and automatic operation. The rubber diaphragm serves as a bumper and brake for the end of the stroke, protecting both the valve and the actuating device from shock. For the hand operation of valves in high positions, we can place the valve with its stem horizontal, replace the handwheel with a chain wheel, and use sufficient endless chain to reach down to the operating floor. When it is desired to operate the valve by electric motor or hydraulic piston, we use a slip stem in place of the regular screw stem. With a lever, cam and slip stem, we can also develop a quick opening valve.

● You will appreciate that, when handling corrosive chemicals which call for special materials of construction, this will apply only to the body casting, as the bonnet and all working parts are on the other side of the diaphragm, and can be made of commercial materials.

An interesting variatiton is the rubber-lined Saunders, very popular for handling bleach, not only in the pulp and paper industry, but also in rayon and textiles. One customer had bought 711 rubber-lined Saunders valves at our last check-up, and was still buying them. Beginning with 1935, rubber-lined Saunders valves have been sold, in this country alone, to the pleasing total of $110,000.00.

As we now see it, the Saunders valve is far and away the best and most economical valve in sight for compressed air, pulp stock, and bleach liquor. It also has innumerable uses for special chemicals.

We believe that the most progressive section of the pulp and paper industry is in the Pacific Northwest, and that engineers and operators of our local mills are leading the world in improving paper pulp and finding new uses for it. It is due to this Pacific Coast progressiveness that the Saunders valve has gone farther in this industry here than anywhere else in the world.

● The biggest Saunders valves ever made, size 14-inch, were made for Northwest pulp engineers; and we had to turn down orders for 16 and 18-inch valves, which we are not yet able to produce on account of certain technical difficulties. Your mills have purchased Saunders valves with bodies of cast iron, pure nickel, Durimet, aluminum bronze, stainless steel, etc., and with cast iron bodies lined with glass, lead, and rubber.

We have enjoyed this business tremendously. We have also sweated blood over it. For it has been no bed of roses. This speaker seems to be condemned to the task or privilege of being a missionary for new equipment. In every case where we bring out a new device or machine designed for a certain purpose, we immediately run into a lot of customers who insist on trying it out on something else. Each customer is sure to have been saving up some tough old problem, and he hopes the new article is heaven-sent to save him. This has been the Saunders valve all over. In spite of the fact that the Saunders valve diaphragm must, by its very nature, be built from an organic plastic material, our customers have insisted in trying to use this valve to hold chlorine gas, hot cooking acid, and all sorts of diabolical chemical combinations concocted for the express purpose of being destructive.

● Our factory is busily conducting research and scouting the laboratories of the whole world looking for diaphragm materials to hold these powerful chemicals, and some progress is being made. We have tested out all sorts of natural and synthetic rubber compounds, resins and plastics. We have diaphragms which are oil resistant, which will hold strong sulphuric acid, and it now looks like we can even hope to include low pressure steam. But we are making no promises whatever for chlorine gas or hot sulphite cooking acid. That kind of business is not Saunders valve business. Please let us stay where we belong!

One advantage of an opportunity like this of talking to a whole group is that I can tell you things that I wouldn't dare tell any one of you individually. For example, suppose you are a consulting engineer or a mill superintendent, and you are very progressive and quick to see the advantage of a new piece of equipment. But suppose your pipe foreman is an old reactionary conservative, who learned all about pipe and valves when he was an apprentice on a Scotch coal barge fifty years ago. There were no Saunders valves fifty years ago anywhere, nor even ten years ago. You buy 'em, but he has to use 'em. He just naturally doesn't like new fangled ideas; he looks on all change with suspicion or even hatred; and he generally finds ways of making it tough for us. We like a chance to meet such men, whether operators or mechanics. Sometimes we can overcome their suspicion or hostility. And, lots of times, these operators and mechanics are progressive, eager to cooperate, and have valuable suggestions to offer. We need to know all we can about operating conditions, and what is expected of our valves. We are deeply grateful for valuable suggestions we have already received from many of our friends among the mills.

● Incidentally, what a tremendous difference there is between operators. We have all marvelled, on the one hand, at the strange genius who can nurse along an old Model T for twenty years, and keep it contented and dependable with the addition now and then of a piece of a mousetrap or a button hook; at the other end of the scale is that unfortunate individual, under whose helpless guidance a brand new Rolls-Royce will deteriorate within two weeks into a bilious junk-heap. Such a man has no conception of the purpose of lubricants, and would never tighten

a ⅝ stud unless he happened to have a four-foot wrench near by. God help the poor valve!

In conclusion, we have had our troubles with the Saunders valve, and a lot of fun. We believe in it. We have made some very bad guesses and, at the same time, we claim to have made a considerable contribution to pulp and paper mill progress. We are tremendously glad we are mixed up in this business with you.

Robert B. Wolf Honored by "Paper Maker"

In the latest issue of "The Paper Maker," quarterly publication of the Paper Makers Chemical Division of the Hercules Powder Company, Robert B. Wolf, manager of the Pulp Division Weyerhaeuser Timber Company, was one of three men whose photographs and brief biographies appeared on the page headed, "Honors to These Men—A page of bouquets handed to men who have contributed to the development of the art and practice of paper making past and present." In each issue of "The Paper Maker" three men are similarly honored.

Quoting "The Paper Maker," To Robert B. Wolf—for his association of approximately 40 years with the pulp and paper industry, an association that began with an experience of three years as a workman and that has been followed with varied executive and engineering experiences which presented chronologically include experience as sulphite superintendent, as assistant chief engineer, as sulphite superintendent, as manager, as consultant, and since 1931 as manager of two mills constituting one of the Pacific Coast's most outstanding developments in the sulphite industry; for his service as staff assistant to the Director General of the U. S. Emergency Fleet Corporation during the War, the only interlude in his years of association with the industry; for his early studies in the bleaching of pulps at high densities and incident development of equipment to bleach such stocks; for his several patents, some of which were issued jointly with his associates, on the preparation of pulps and on bleaching; for his development of a system for building up a high sulphur dioxide content in sulphite cooking acid—a system that offers certain technological advantages of merit, for his association and club affiliations—Fellow A. S. M. E., TAPPI, Canadian Technical Section of Pulp and Paper Industry, American Society for the Advancement of Science, National Association of Cost Accountants, Engineer's Club (Boston and New York), National Arts Club (New York), and Washington Athletic Club (Seattle)—that manifest his broad interests; and most of all for his progressive ideas relating to both production and management as evidenced by his authorship of such articles as Individuality in Industry, Control and Consent, The Creative Workman, Modern Industry and the Individual, Non-Financial Incentives, The Human Relations in Industry, and Trade Union Agreements, and for his initiative in putting his ideas into practice.

Mr. Wolf returned to the United States October 7th after several months abroad where he studied the European pulp situation with Oliver M. Porter, secretary of the United States Pulp Producers Association.

The other two men honored in the last issue of "The Paper Maker" were C. E. Curran, chief of the Section of Pulp and Paper of the Forest Products Laboratory in Madison, Wisconsin, and B. W. Scribner, chief of the Paper Section of the National Bureau of Standards in Washington, D. C.

"The Paper Maker" is a coil wire bound publication beautifully printed on several types of fine paper, profusely illustrated with unusual photographs. The latest issue featured an interesting historical article on playing cards and paper; an article with samples on Japanese hand made papers; historical facts about paper making in the United States; and, an article on the production of Hercules naval stores.

ROBERT B. WOLF,
Manager Pulp Division
Weyerhaeuser Timber Co.

Canadian Pulp Exports Larger This Year

Exports of all classes of wood pulp from Canada during the first 8 months of the current year were substantially higher than during the corresponding period in 1936, according to a special report sent in by the Canadian Pulp and Paper Association. Exports of bleached sulphite, which represent the largest item in this group, rose from 226,522 short tons to 255,728 short tons. During the same period exports of unbleached sulphite pulp rose from 74,485 to 111,558 tons; sulphate pulp from 77,537 to 85,710 tons; and mechanical pulp from 88,527 to 98,345 tons. The United States took 80 per cent of the bleached sulphite, 96 per cent of the sulphate, and practically all of the mechanical pulp. On the other hand, its imports of unbleached sulphite dropped from 52,234 tons (representing 70 per cent of the total exports last year, to 1,644 tons (1 per cent) during the current year. At the same time exports of the latter class to Japan rose from 18,853 tons last year to 79,161 during the current year, and exports to the United Kingdom from 869 to 28,559 short tons during the same period.

September News Print

Production in Canada during September, 1937, amounted to 312,351 tons and shipments to 306,548 tons. Production in the United States was 77,635 tons and shipments 73,838 tons, making a total United States and Canadian news print production of 389,986 tons and shipments of 380,386 tons. During September 31,160 tons of news print were made in Newfoundland, so that the total North American production for the month amounted to 421,146 tons. Total production in September, 1936, was 369,609 tons.

The Canadian mills produced 426,784 tons more in the first nine months of 1937 than in the first nine months of 1936, which was an increase of eighteen and five-tenths per cent. The output in the United States was 26,154 tons or three and eight-tenths per cent more than in the first nine months of 1936, and in Newfoundland 29,331 tons or twelve and one-tenth per cent more, making a total increase of 482,269 tons, or fifteen per cent.

Stocks of news print paper at Canadian mills were reported at 89,553 tons at the end of September and 21,473 tons at United States mills, making a combined total of 111,026 tons compared with 101,426 tons on August 31, 1937.

New Swedish Wall Board Mill Completed

Aktiebolaget Scharin & Soner, which firm recently sold two mechanical wood pulp mills to the British news print concern of Bowater, completed construction on September 10, 1937, of a new wall board mill at Klemensnas, reported to be the most up to date in the country and with an estimated annual capacity of 2,500,000 square meters. The cost of construction of the new mill was approximately 1,000.000 crowns (Swedish crowns 3.93 to $1, U. S. currency) and in virtue of highly rationalized working methods only 50 workers are necessary for the production of the estimated output. (Commercial Attache Charles E. Dickerson, Jr., Stockholm).

Wood Pulp Market In Brazil

Imports of wood pulp into Brazil during 1936 reached a total of 84,460 metric tons, according to a report from the American Consulate General in Rio de Janeiro. The greater part of these imports came from Germany and the Scandinavian countries.

Wood pulp for the manufacture of paper is admitted into Brazil at reduced rates of duty, provided it complies with the regulations which are designed to prevent the use of wood pulp for purposes other than paper making. The regulations provide that wood pulp sheets must be perforated in the form of circles, rectangles or triangles, having a diameter or base of 15 millimeters or more and spaced every 10 centimeters or less. It was found, however, that this regulation was not in accordance with the usual practice throughout the world, and, by ministerial order, the application of this item of the tariff is not being rigidly enforced. Under present practice, the holes punctured in the wood pulp sheets need not be clean cut, and a tolerance of 2 centimeters in the spacing is permitted.

Pulp and Paper Imports Exports During August

Exports of paper and paper products from the United States during August 1937 reached an aggregate value of $2,807,426, according to figures just released by the Pulp and Paper Section of the Forest Products Division of the Bureau of Foreign and Domestic Commerce. This amount does not mark any great change over the values recorded for the two preceding months but is nearly 50 per cent higher than the value recorded for August, 1936. Exports of news print, book and writing papers, sheathing papers and paperboards continue high, although the first two items mentioned failed to reach the level of the previous month. Shipments of paperboards, including boxboards, were far ahead of those recorded for the preceding month or the corresponding month last year. Exports of building boards, however, are showing a tendency to slacken. August shipments of both insulating and wall boards were not only considerably lower than the preceding month, but were approximately 10 per cent lower than a year ago. Exports of sheathing papers dropped off about 15 per cent compared with July but more than trebled the August 1936 shipments. While the increase in value as compared with August, 1936, is due to some extent to a higher level of prices now in effect, there is no doubt but the volume of shipments this year was substantially higher.

Exports of wood pulp dropped off to some extent during August as compared with July, but at the same time were 67 per cent higher than for the corresponding month last year. Bleached sulphite continues to be an important item, representing about three-fourths of our wood pulp exports. The August shipments of this particular grade were 10 per cent under those recorded for the previous month, but were 75 per cent above the August, 1936, shipments. The decline in exports of unbleached sulphite, which constitutes the greater part of the remaining wood pulp shipments, was relatively larger amounting to over 20 per cent. Exports of other paper stock, mostly rag and waste paper, dropped off considerably during August.

Exports under this group reached an aggregate value of $2,298,959 during August as against $2,831,845 during July, and $1,139,104 during August, 1936.

Imports of paper base stocks into the United States during August dropped off slightly compared with the preceding month, although the total value of such receipts amounting to $11,731,403 was nearly 20 per cent higher than for the month of August, 1936. This increase was due partly to the heavier volume of imports of pulpwood and waste of various sorts, exclusive of rags, and partly to the higher prices in effect this year. Imports of wood pulp, totaling 216,523 tons, dropped off 5 per cent compared with July but were about on a level with the corresponding month last year. Receipts of sulphite pulp were somewhat higher than in 1936, but increases in this class amounting to 7,904 tons, were more than offset by a decline of 9,467 tons in imports of unbleached sulphate pulp. Imports of bleached sulphate pulp and of soda pulp were higher than last year, but those two items are relatively small compared with other items in this group. Imports of paper-making rags, amounting to 6,336 tons were 50 per cent under consignments recorded for last year. Total importations of waste stock during August were valued at $11,731,403, of which $2,133,521 represented pulpwood, $9,199,403 wood pulp, and $398,602 waste for paper making.

Imports of news print paper, which make up about 85 per cent of our total paper importations, dropped off 15 per cent during August as comared with the previous month. The total receipts amounting to 260,158 tons, however, were about 6 per cent higher than recorded for the corresponding month last year. Of the remaining imports, other printing papers, greaseproof and waterproof papers, surface-coated papers, writing papers, and paper boards of various sorts were substantially higher than during the same month last year. Imports of kraft wrapping paper, another important item on this schedule, were 33 per cent under the preceding month and 51 per cent under the corresponding month in 1936. Imports of pulpboards in rolls show an improvement of 12 per cent over the preceding month, but a decline of 25 per cent compared with August, 1936. Total imports of paper and paper products during August were valued at $11,033,239, of which $9,675,678 represented news print and $1,357,561 all other paper and paper products. These figures represent an increase over August, 1936, of 10.7 per cent for total imports, 11.2 per cent for news print, and 7 per cent for other papers.

Japanese Paper Production Rises

Production of machine-made paper by companies of the Japanese Manufacturers' Association during the second quarter of 1937 reached a total of 282,890 short tons, an increase of 13 per cent over the preceding quarter and of 23 per cent over the corresponding quarter in 1936. Production for the first 6 months of the current year are reported at 532,865 short tons, an increase of 20 per cent over the same period in 1936.

The heavy demand for paper of all sorts but chiefly printing paper caused the Japan Paper Manufacturers' Association to lower the curtailment rate from 28 per cent to 10 per cent, effective June 1 for a 12-month period. The rising prices for paper and the fact that domestic producers were curtailing their production more than was deemed necessary, as well as the steady expansion of Japan's exports of paper, were responsible for some frank criticism appearing during the past several months. (Assistant Trade Commissioner Carl H. Boehringer, Tokyo).

Heller & Merz Extend Service

On November 1st, Heller and Merz will open a New Paper Application Laboratory at their Chicago office, located at 146 West Kinzie Street. This laboratory will service the Heller and Merz accounts in Minnesota, Wisconsin, Michigan, Indiana, Illinois, Missouri and Kansas. The men who will be in charge of the laboratory have all had years of experience in the company's main laboratories at Bound Brook, N. J.

PAPER MAKERS' NIGHT at the Port Angeles Elks Club October 14th brought out a large crowd . . . The Washington Pulp & Paper Corporation were guests of honor at the party given by the rest of the members of the lodge . . . The paper makers, wearing news print hats were waited on by lodge officials dressed in dinner jackets . . . Some three hundred Elks attended the dinner and attested to the fact that the Washington Pulp & Paper Corporation Elks are the "backbone" of the Port Angeles lodge.

Rayon Production—
Is It Feasible in the Pacific Northwest?

by WILLIAM C. McINDOE, Industrial Chemist

PERHAPS, the greatest natural resources of the Pacific Northwest are its lumber and wood pulp. Since 1929 it has become increasingly evident that, in its bleached sulphite pulp from Western hemlock, the Pacific Northwest possesses in great abundance an excellent basic raw material for the rayon, cellophane, plastic, and lacquer industries. Up to the present time these industries have been located in the East and Southeast, generally along the back-bone of the Appalachian Mountains.

Let us consider the factors that might encourage the rapidly expanding rayon industry to establish branch plants out here in the Northwest, while not deserting any of the present locations. These factors might be grouped roughly into four sections: (1) Pacific sources and costs of raw materials, power and fuel; (2) plant sites; (3) available markets and transportation costs; and (4) other cost factors; such as labor, taxes, etc.

I. Pacific Sources and Costs of Raw Materials

● If a manufacturing plant here in the Pacific Northwest had to ship in all, or even a major portion of its raw materials from Eastern sources and then return its manufactured articles to Eastern markets, the transportation costs would be prohibitive. But Pacific sources of materials and present and potential local markets would yield an entirely different answer. A recent personal survey of such sources and costs showed that for all three of the commercially important rayon processes, viscose, cellulose acetate, and cuprammonium, all of the necessary materials were present articles of Pacific manufacture, save only acetic acid and its anhydride, and that even these were between pilot and plant scale development for future production. Pacific prices for these materials are not higher than New York levels and, in some cases, are below that standard.

To be specific, it has been found that sufficient quantities of the necessary materials can be secured for the pirces quoted from points of origin in the states mentioned below.

● **Wood Pulp — Bleached Sulphite:** (At present, only the viscose process is using wood pulp. Requirement: 1.15 lbs. per lb. of yarn produced.)

At the present time three pulp mills in the State of Washington, Rainier Pulp & Paper Company, Shelton, Washington, Grays Harbor Pulp & Paper Company, Hoquiam, Washington, and Olympic Forest Products Company, Port Angeles, Washington, are heavily engaged in manufacturing bleached sulphite pulp from Western hemlock for foreign as well as domestic rayon manufacture. Also, they are reorganizing and consolidating their corporate set-up for more effective participation in this field.

Pacific Northwest Supplied 40%

It has been estimated that these mills supplied 40% of the pulp going into the domestic production of viscose rayon in 1936, in addition to 119,528 tons of bleached sulphite pulp taken by Japan. The 1936 domestic viscose rayon production of 214,329,000 pounds is calculated to have required 246,478,000 pounds of pulp, of which the Pacific Northwest supplied an estimated 98,600,000 pounds. Reduced back to a daily production basis, this amounts to 160 tons of pulp daily. Similarly, the 119,528 tons exported to Japan involved a production of 385 tons per day. The combined daily production of 545 tons used only 68% of the combined capacity of these three mills.

In addition to these three mills already in the field, the following Pacific Northwest pulp mills were operating on Western hemlock on January 1, 1937: Soundview Pulp Co., Everett, Washington, 320 tons, bleached; Weyerhaeuser Timber Co., Everett, Washington, 200, unbleached; Weyerhaeuser Lumber Co., Longview, Washington, 200, bleached; Spaulding Pulp & Paper Co., Newberg, Oregon, 70, unbleached; Coos Bay Pulp Corporation, Empire, Oregon, 60, unbleached; Puget Sound Pulp & Timber Co., Anacortes, Washington, 80, unbleached; Puget Sound Pulp & Timber Co., Bellingham, Washington, 100, unbleached.

Should an attractive local rayon pulp market develop, some, if not all, of these could be expected to do the extra bleaching and washing necessary for a satisfactory rayon pulp.

So far, only the sulphite process has been used commercially to produce rayon pulp; but rapid strides have been made recently in both quality and bleaching of sulphate pulps. In this regard, the activities of St. Regis Kraft Company, Tacoma, Washington, will bear watching. They are bleaching a sulphate pulp from Western hemlock with a daily capacity of 180 tons.

Brian Shera, chemical engineer of Pennsylvania Salt Company, in his recent article on the "Advancement in Kraft Pulp Bleaching", (Pacific Pulp & Paper Industry 10, 15-17, December, 1936), called attention to the high A — cellulose content attained and claimed that the pulp was suitable for rayon:

Bleached Kraft

A—cellulose	95.5%
B—cellulose	0.5
G—cellulose	3.5
Ash	0.1
copper no.	1.0

WILLIAM C. McINDOE
Studied Rayon Possibilities

The rayon pulp, (89% to 93% A—cellulose), sells (at the time this is written) for $70.00 per ton f.o.b. the pulp mill. The present railroad freight rate for transporting this pulp from Puget Sound and Olympic Peninsula mill points to Portland, Oregon, or Vancouver, Washington, is $3.50 per ton, (min. 50,000 lbs.). The rate from Newberg, Oregon, to Portland, Oregon, is $1.43 per ton. At present the steamship companies do not show any interest in so short a haul. The effect of the proposed inland waterway through Bonneville Dam on the water transportation set-up is unpredictable.

● **Cotton Linters, second cut:** All three processes are using varying amounts of cotton linters. The acetate and cuprammonium processes both depend upon it alone for their source of cellulose, the former requiring 0.7 lb. linters per lb. of yarn produced; the latter, 0.92 lb. linters per lb. of yarn. For the improvement in quality imparted, even the viscose process dilutes their wood pulp cellulose with amounts of cotton linters varying from 10% to 50%, with the average for the domestic industry hovering around 30%.

Arizona, California and Texas are the cotton producing Western states. Arizona boasts that cotton is still her most important agricultural crop; but the amounts and price of cotton linters that might be available are known to the writer at the moment. From the Imperial Valley in California, around Fresno and Bakersfield, raw cotton linters are sent to Los Angeles and San Diego for processing. Firms handling the lintess report that between 25,000 and 30,000 bales, averaging 550 lbs. each, would be available annually from the present acreage. Converted to a weight basis, these estimates become 6,875 to 8,250 tons, which would be sufficient to support acetate rayon plants of 19,600,000 to 23,600,000 lbs. yarn capacity per year.

Purchased at mill points for $70.00 to $90.00 per ton f.o.b., (1935-36 prices), the graded and baled linters can be shipped by water to Portland, Oregon, from Los Angeles, or San Diego, for $5.50 per ton for minimum carload lots of 30,000 lbs. The corresponding rail rate is $10.00 to Portland with an additional $1.00 for delivery to Puget Sound points.

Texas, already supplying the rayon industry with sizable quantities of linters, can put her product on the docks at Houston. F. o. b. prices similar to those in California prevail. For minimum lots of 15,000 lbs. the water rate between Houston and Portland is $12.80 per ton. The Ports of Portland and Houston have wharfage charges of $0.50 and $0.40 per ton, respectively.

These raw linters must be cleaned and bleached to become the "chemical cotton" used in the processes. A typical analysis of this material follows:

A—cellulose	98.0 % min
hemi-cellulose	3.5 % max.
ash	0.1 % max.
ether extract (wax and resin content)	0.15 % max.
Copper No.	0.25 % max.

● **Acetic Acid and Acetic Anhydride:** The glacial acetic acid and its anhydride used exclusively by the acetate process to the extent of 2.4 to 3.25 lbs. of the former and 2.0 to 2.4 lbs. of the latter per pound of yarn, have been made experimentally from refinery gases by several of the major oil companies on the Pacific Coast. Only the further encouragement of a market for these two chemicals would be needed to add them swiftly to the growing list of Pacifiic manufacture. Since these companies would be utilizing an otherwise waste material, their low cost of manufacture could be reflected in prices below New York levels; thus, at or below $0.08½ for the glacial acid and $0.15 per pound for the anhydride.

In addition, there are strong indications that, should a sufficiently low rate be set for firm power at the Bonneville Dam switch-board and a reasonably low transmission charge be assessed for practical distances from the dam, a calcium carbide manufacturing plant would be among the first chemical industries to be established. Very cheap acetic acid and anhydride, as well as acetone, are easily derived from the acetylene produced from calcium carbide.

Existing freight rates for these two chemicals are based on very small movements. Should tank car lots be in demand, however, it is reasonable to expect rates similar to those for sulphuric acid, or $8.00 per ton by rail from San Francisco to Portland or $6.00 by water (minimum 24,000 lbs.).

● **Acetone:** Acetone is the volatile, non-toxic solvent used in the spinning solution of the acetate process. Four pounds of this chemical are used per pound of yarn produced. Acetone has just recently been put on the market in California by one of the major oil companies. Manufactured from their refinery gases, they are pricing it at $0.06 per pound delivered to railway common points, (near San Francisco Bay region), for tank car lots of 6,000, 8,000, and 10,000 gallons capacity. These tank cars travel from San Francisco to Portland for a 5th class rate of $9.40 per ton. The corresponding water rates from San Francisco, Los Angeles and San Diego to Portland are $5.60, $7.00 and $8.00, per ton, respectively.

● **Ammonia, 26°:** Two, or more, plants in California; two in Washington, (with perhaps a new one near Tacoma in the near future), can supply the 26° ammonia needed by the cuprammonium process to the extent of 0.57 lb. per pound of yarn. Currently the f.o.b. works price has been $100.00 per ton of contained ammonia. Water freight rates to Portland from San Francisco and Los Angeles are $2.00 per ton lower than the rail rates of $8.00 and $10.00 per ton, respectively. A proportional rail rate of $3.20 per ton exists between Seattle and Portland.

● **Carbon Bisulphide:** The viscose process needs carbon bisulphide to the extent of 0.38 lb. per pound of yarn. California manufacturers will supply it in tank car lots for $90.00 per ton f.o.b. San Francisco. From there a Portland destination costs $9.40 per ton by rail and $7.20 by water.

● **Copper Sulphate:** 0.75 lb. of copper sulphate is employed in the production of every pound of yarn in the cuprammonium process. At least four plants in California, two in Washington, and also plants in Montana and Utah manufacture this chemical. $89.00 buys one ton of it f.o.b. Pacific Coast ports. The railroads ask $6.80 per ton to transport a minimum of 36,000 lbs. from San Francisco to Portland and the rate from Tacoma, Washington, is $3.70 per ton for minimum lots of 40,000 lbs.

● **Glucose, or other Carbohydrates:** By hydrolysis methods, glucose, or corn sugar, is manufactured commercially from corn starch; but

can be obtained from both cane and beet sugars by a somewhat similar hydrolysis, and, also, from cellulose. The choice of source would depend largely upon locale. This conversion into glucose, however, is not necessary because other sugars have been successfully substituted for the glucose used in the coagulating baths of both the viscose and cuprammonium processes. A requirement of 0.36 to 0.5 lb. per pound of yarn is reported, calculated as glucose. Though glucose is not manufactured on this Coast, both cane and beet sugars are.

Cane sugar is refined quite extensively in California. The Spreckels Beet Sugar Refinery has just been completed at Woodland, California, at a reported cost of $2,500,000. Cane sugar brings $100.00 per ton f.o.b. San Francisco, less 2% for payment ten days after arrival. Beet sugar is $2.00 cheaper per ton. Beet sugar is also refined near Bellingham, Washington. With Portland as the destination, the rail rate from San Francisco is $5.20 per ton in bags, (minimum 36,200 lbs.); from Bellingham, Washington, is $6.40 (minimum 40,000 lbs.) and is $4.50 (minimum 36,000 lbs.) from Seattle, Washington. By water the rate from San Francisco to Portland is $4.40 per ton and an additional $0.64 for Puget Sound delivery.

● **Caustic Soda:** The demands of the rayon industry for large quantities of caustic soda, chiefly for the viscose process, rate the industry second only to the soap manufacturers as domestic consumers. The pulp and paper industry here in the Pacific Northwest consume large amounts of it. Two plants each in California and Washington make it. The demands of the viscose process have been variously reported as ranging from 1.4 to 1.82 lbs. of 100% NaOH, usually purchased in liquid from as a 50% solution in tank cars. The current Pacific quotation for the solid 76% caustic soda in drums is $48.00 per ton f.o.b. Pacific producing points, (Pittsburg, California, and Tacoma, Washington). The 50% liquid sells for $43.00 per ton, (basis 76% solid caustic soda), f.o.b. Tacoma.

● **Sodium Sulphide:** The viscose process uses a solution of sodium sulphide as a washing bath for the removal of sulphur and its compounds which cling to the yarn due to decomposition reactions occuring in the coagulating bath. At present two plants in California supply this chemical in considerable quantities to the fruit orchards of eastern Washington and Oregon as an insecticide. It reaches the market in two forms of 60% to 62% strength; solid fused in 700-pound drums and flake in 400-pound drums. The fused form costs $50.00 per ton f.o.b. San Francisco; the flake, $60.00. By rail it costs $9.40 per ton to ship from San Francisco to Portland; by water, $5.00, for minimum lots of 40,000 and 30,000 lbs., respectively.

● **Sodium Sulphate:** The coagulating bath of the viscose process uses 0.4 lb. of sodium sulphate for every pound of yarn produced. Manufactured in at least four plants in California and one in Nevada, its f.o.b. San Francisco price is $8.50 per ton for bulk crystalline, Glauber's Salt. "Trona" salt cake in bulk f.o.b. cars in Portland, Oregon, is $12.75 per ton; while the desiccated variety brings $17.85 per ton for minimum carload lots of 100,000 lbs.

The prevailing rail freight rates for refined Glauber's salt from San Francisco and Los Angeles to Portland, Oregon, Vancouver and Longview, Washington, are $6.60 and $7.60 per ton, respectively. Salt cake in minimum carload lots of 100,000 lbs. goes from Trona, McKittrick, Nichols, Hercules and Los Angeles, California, to Portland, Oregon, Vancouver and Longview, Washington, for $6.00 per ton. From Rhodes, Nevada, to the same destinations as little as 80,000 lbs. will go for the $6.00 rate. The water rate from San Francisco to Portland specifies a minimum of 80,000 lbs. at a $3.80 per ton. From Los Angeles the minimum is 100,000 lbs. for $4.40 per ton.

● **Sulphuric Acid, 60° Be.:** All three processes use sulphuric acid of 60°Be. strength: viscose, 1.9 lbs. per pound of yarn; acetate, only 0.1 lb.; and cuprammonium, 0.8 lb. Due to the oil refining needs of the petroleum industry, enormous quantities of this acid are manufactured on the Pacific Coast. There are ten plants in California and at least one in the State of Washington making it. The price in tank cars is $12.50 per ton, (basis 100% acid), f.o.b. San Francisco. Portland, Oregon, Vancouver and Longview, Washington, all pay the same rail freight for this acid from San Francisco; $8.00 per ton for a minimum of 24,000 lbs. The rate between Dupont, Washington, and Portland, Oregon, for 1600-pound drums is $5.00 per ton for a minimum shipment of 36,000 lbs. It costs only $3.70 per ton, if the size of the shipment is in excess of 100,000 lbs. in tank cars. A minimum of 24,000 lbs. prevails for water shipments between San Francisco and Portland at a rate of $6.00 per ton.

● **Sulphur Dichloride:** This catalyst for the process of converting glacial acetic acid into its anhydride comes as a red liquid containing from 66 to 67½% chlorine. It is offered in tank car lots at $44.00 per ton f.o.b. Tacoma, Washington. However, this low a price can be maintained only by a market of about 5,000 tons or better per year. The carriers report that there has been no movement of this chemical on this Coast for years but offer an estimated freight rate of $6.00 per ton for minimum lots of 24,000 lbs. between Tacoma and Portland.

● **Sulphur Dioxide — Liquid:** Liquid Sulphur dioxide, already used in large quantities on the Pacific Coast for oil refining, curing and bleaching of fruits, and for preparing chemical pulps in the pulp and paper industry, is suggested by the U. S. Industrial Alcohol Company as a complete substitute for the glacial acetic acid solvent or vehicle in which to carry on the acetylation reaction between acetic anhydride and cellulose in the acetate process.

Freight Rates on Caustic Soda

SOURCE:	SAN FRANCISCO, CALIFORNIA			
Destination:	Package	Rate—Ton	Min. Rate Limit lbs.	Carrier
Portland, Oregon	725-lb. drums	$6.20	30,400	rail
	Drums	$5.00	30,000	water
Vancouver, Washington	Drums	$6.20	30,700	rail
Longview, Washington	Drums	$6.20	32,300	rail
SOURCE	TACOMA, WASHINGTON			
Destination:				
Portland, Oregon	Drums	$4.90	50,000	rail
	Tank car	$3.30	100,000	water
Langview, Washington	Drums	$4.90	50,000	rail
	Tank car	$3.30	100,000	water

The price of this chemical is $60.00 per ton in tank cars f.o.b. San Francisco. Minimum carload lots of 30,000 lbs. will be delivered anywhere in the Pacific Northwest from Tacoma, Washington, for $3.20 per ton. $7.20, $9.20, and $10.20 are the rates per ton prevailing between San Francisco, Los Angeles and San Diego, California, respectively, and Portland, Oregon, Vancouver and Longview, Washington, for shipments of similar size.

• **Zinc Sulphate:** Zinc sulphate is manufactured in California. The viscose process uses it in the coagulating bath and require 0.04 lbs. of it for every pound of yarn. Packed in 100-lb. burlap bags, it is quoted at $2.87½ per 100 lbs. f.o.b. cars at Portland, Oregon, or any other Pacific Coast port for minimum carload lots.

For the purpose of this article freight rates were secured for Portland, Oregon, as a destination. Portland's central location in the Pacific Northwest governed this choice for rate analysis. The Northwest possesses a host of plant sites, some of which are equally as attractive.

Comparison of these concrete figures with prices and rates obtaining elsewhere in the United States will demonstrate clearly that the Pacific Coast can claim at least parity and in some cases superiority.

These actual practical quotations are submitted in proof of our claims that we have the necessary materials here in the Pacific Northwest.

WILLIAM C. McINDOE obtained his Batchelor of Science degree in 1918 from Harvard and his Master's degree in 1922 from the University of Washington. During 1921 he was instructor in physics and DuPont fellow in chemistry at the University of Washington.

Mr. McIndoe has had experience in several industries. He was formerly gas engineer for the Portland Gas & Coke Company of Portland, Oregon; research chemist for the Standard Oil Companies of California and New Jersey; production chemist for the Celanese Corporation of America (rayon); and, for the past fiscal year he has served as assistant chemist, Corps of Engineers, U. S. Army, Office of the Division Engineer, North Pacific Division, Portland, Oregon.

In this latter capacity Mr. McIndoe has been engaged in making industrial studies of Pacific sources of raw materials, transportation costs, plant sites, available markets, etc., for potential chemical industries to utilize power from the Bonneville Dam.

Set All Time Low Forest Fire Record

The lowest three-year forest fire record in the North Pacific Region for all time has been set by the U. S. forest service in the past three years, according to announcement by regional forester C. J. Buck this week.

Acreage fire losses on the twenty national forests of Oregon and Washington in the three years from 1935-1937 inclusive have sunk to the lowest level since these forests were established in 1906. Loss inside national forest boundaries for the past three years was 20,802 acres burned out of a total area of over 27 million acres. Lowest previous loss was recorded in the three years from 1933 to 1935 when a total area of 37,104 acres within forest boundaries was burned. Prior to 1933 the lowest three year total was 84,000 acres, comprising lands burned over within national forests of the two states from 1911 to 1913.

Unquestionably the CCC must come in for some of the credit for this outstanding record, according to Buck. "It will be noted," said the regional forester, "that both of the low three year totals have occurred since the establishment of the CCC in 1933. Aside from the available force of trained CCC fire fighters, which now can be called into action on fires without delay, the material accomplishments of the tree troopers toward fire proofing the forests have been of great importance.

"Lookout towers have been built, many miles of telephone line have been constructed, and many miles of forest protection road have made fire endangered sections more accessible to quickly transported fire fighters. Fire hazard has been reduced on thousands of acres, and hundreds of miles of fire break have made the danger of uncontrolled blazes less imminent.

"Nor has the march of science with its constant improvements for detection and suppression of forest fires lagged behind the general fire proofing accomplishments. By no means least in importance, a quickened fire consciousness on the part of the public and a more effective system by the logging industry have helped reduce fire losses."

As people begin to see that timber is to be treated as a crop they begin more carefully to provide against the loss of future yields, Buck believes. "The appalling fire losses of the past have been a serious obstacle to the sustained yield timber program of the two states, vitally important to the future tax structure," he says.

Finnish Pulp and Paper Production Rising

Production figures for the Finnish output of paper and pulp are available only on an annual basis. However, since less than 10 per cent of the production is retained for consumption in Finland, a reasonably accurate indication of production trends is available from statistics on exports. A considerable volume of pulp of course is retained in Finland for manufacture into paper and is subsequently exported in that form. The official trade returns show exports of mechanical pulp for the second quarter of the current year as totaling 75,410 metric tons (metric ton = 2,204.6 pounds) dry weight, as against 62,794 tons for the corresponding period in 1936. Chemical pulp for the same period shows an increase from 260,366 tons in 1936 to 311,715 in 1937. Exports of news print paper, which represent roughly 80 per cent of the total exports in this line, amounted to 98,885 metric tons during the second quarter of 1937 as against 82,824 tons in the previous year.

The volume of orders on hand June 30 was higher for all groups except mechanical groundwood pulp. Orders on hand for chemical pulp and news print were the largest on record and it appears that the increased production of these items will continue for the remainder of the year. Price tendencies for chemical and mechanical wood pulp, news print, and wrapping papers were firm throughout the quarter. According to the Finnish Paper and Timber Journal, quotations for kraft, sulphite paper, and greaseproof were somewhat higher than in previous months. (Consul Archibald E. Gray, Helsingfors).

Italian Paper Production Up

Paper manufacturing establishments in Italy, which number 214, exclusive of those employing fewer than 15 operatives, produced 2,506 metric tons of paper and cardboard during the first 6 months of 1937, as against 2,216 tons produced during the same period of 1936. (Assistant Commercial Attache Malcolm P. Hooper, Rome).

Finnish Kraft Mill Being Enlarged

The Bjorneborgs Pappersbruk belonging to W. Rosenlew Co., A. B., is being partially rebuilt so as to increase the annual production from 25,000 to 35,000 metric tons. This mill produces kraft paper. (Consul Archibald E. Gray, Helsingfors).

The Brazilian Paper Industry

There are 21 mills in Brazil with an aggregate production of about 70,000 metric tons of paper per annum. These mills produce a wide variety of paper not including news print. Total imports of paper and paper production in 1936 amounted to 58,800 metric tons, over 80 per cent of which consisted of news print paper. News print imports come chiefly from the Scandinavian countries and Germany. News print rolls for this market are packed in wooden staves and ends, which entirely cover the paper. (American Consulate General, Rio de Janeiro).

History of Trade Unionism In Sweden

Prepared by a leading Swedish industrialist, this interesting and enlightening article was obtained by R. B. WOLF, Manager of the Pulp Division, Weyerhaeuser Timber Company, and O. M. PORTER, Secretary of the United States Pulp Producers' Association during their recent visit to Sweden – It has been sent to all members of the association and is reproduced here because of its general interest to the American pulp and paper industry

● **HISTORY:** Trade unionism in Sweden can be traced back to the 1870's. In 1886 the socialists obtained the majority in the "Central Committee of Trade Unions" at Stockholm and drew up a socialistic Trade Union program. In the same year the first Scandinavian Trade Union Congress was held on a socialistic basis. In the 1890's the skilled workers' unions as well as the unskilled workers joined in federations covering allied trades. On the initiative of a Scandinavian congress held in Stockholm in 1897, the trade unions of Denmark, Sweden, and Norway formed national organizations. "The National Federation of Swedish Trade Unions" Landsorganisationen—L. O., was constituted in August, 1898. The "Federation of Swedish Workers", politically neutral but having a rather conservative tendency, was formed as a counter-organization in 1899 but was liquidated after having made common cause with the L. O. in the general strike of 1909. The defeat of the general strike led to the formation in 1910 of "The Central Organization of Swedish Workers" S. A. C., as the organ of a radical decentralization and "direct action"; this organization still exists but is confined to very few trades only and has a low and gradually declining membership of about 33,000.

The consolidation of the workers' organizations in the 1890's led to the organizing of the employers in certain industries, at first in individual branches only, e. g., "The Association of Swedish Work Shops" established in 1896. At the turn of the century, efforts were made to form a central employers' organization. After some futile attempts, a political demonstration in the form of a strike caused a few large industrial establishments in various parts of the country to form "The Swedish Employers' Federation", Svenska Arbetsgivareforeningen — S. A. F., (Sept. 1902). A separate organization for the building construction and allied trades transport and certain handicrafts "The Central Employers' Federation" (Centrala Arbetsgivareforbundet) was formed in 1903 and dissolved in 1918, when most of its members joined the S. A. F. The association of Swedish Work Shops joined the same central organization early in 1917.

● In view of the aggressive strike policy and socialistic aims of the trade unions, the employers, naturally, from the beginning were anxious to keep their workers away from the trade unions and from politics. This tendency which led to numerous controversies regarding the "right of organizing" was just as naturally kept alive in the first ten years of the new century, at which time conflicts of a purely economic nature were also frequent. In the meantime the National Federation of Swedish Trade Unions, the L O., grew rapidly. When the S. A. F. was formed in 1902, the L. O. had 40,000 members, this number being more than doubled in 1904. In 1906 it reached 144,000, and in 1907 186,000. At the same time, the extent of the S. A. F., measured by the number of workmen employed by its members, had expanded rapidly from the original figure of about 20,000; towards the end of 1906 the number of workmen was 65,000, one year later 127,000, and by the end of 1908 154,000. The membership on both sides had now grown to an extent where the question of the right-of-organizing had receded into the background. The S.A.F. had early decided that development justified the recognition of the trade unions and the adjustment of working conditions by collective agreements. The right of the employer at his own discretion to lead and to allot the work and to engage and dismiss workers regardless of their being organized or not, and on the other hand the workers right to organize were mutually recognized in a joint clause—popularly referred to as "Section 23"; i. e. a section of the Statutes of the S. A. F.—which was to be embodied in all collective agreements between the parties. This agreement was made early in 1907, and up to the present the clause has always been applied.

General peace in the labor market was not expected and did not result from the acceptance of this modus vivendi. The trade unionism was still in the stage of fermentation, and the employers on their part were too worried by its attack not to watch for an opportunity to throw the yoke off their shoulders. The inevitable collision occurred on August 4th, 1909, when the L. O. declared a general strike in all possible branches of industry and communication in reply to lockouts declared by the S. A. F. in several branches of industry where disputes on working conditions had arisen. Some public works also became involved in the struggle and also the unorganized workers joined in the strike. The L. O. had 162,000 members, and the workers—organized and unorganized—employed by the members of the S. A. F. totalled more than 158,000. Nevertheless, there were about 300,000 strikers at the height of the general strike. However, after a month, its efficacy was broken but its consequences extended over several years. In 1910 the L. O.s membership fell to only 85,000—a reduction of 100,000 from the maximum in 1907. The S. A. F., on the other hand, increased in the number of workmen employed in 1910 and every subsequent year, and in 1915 the number exceeded 170,000.

• The defeat of the workers in the general strike also affected the system of collective wage agreements. Several industries involved in the general strike did not renew their collective agreements. At that time many employers undoubtedly thought that the trade unionism would collapse and that collective agreements would consequently disappear. But the L. O. did not take long to recover. Its membership which in 1911 had fallen to 80,000 rose in the next four years to 85,000, 97,000, 101,000 and 110,000, respectively; the previously highest level, 186,000, was regained in 1917, in 1918 it had risen to 222,000, and continued to rise with large numbers year after year with the sole exception of 1921—the year of the post-war and deflation crisis. In 1925 the membership was 385,000, and it is now 725,000. The affiliation of seven new large and small trade unions as well as a heavy increase in the memberships of the 34 old unions has contributed to this increase. The S. A. F. is at present employing about 325,000 workers. It should be noted, however, that the L. O. includes also trade unions in non-industrial trades not belonging to the S. A. F.

The waning of trade unionism after the general strike in 1909 resulted in a quiet period in the labor market, which in the main continued right up to the outbreak of the Great War. New problems then presented themselves. Collective agreements had generally been resumed but the enormous increase in prices due to the international inflation and the shortage of goods during the last few years of the War led to a new crisis in respect of collective agreements. The fall in real wages due to the depreciation of the monetary value was catastrophic, and the wages fixed by the long-term collective agreements were supplemented by "cost-of-living increments" which have since been gradually eliminated. The post-war economic crisis was aggravated by the legal introduction of the eight-hour day in 1919. The crisis reached Sweden at the end of 1920. The deflation was ruthlessly carried into effect, and in 1921-1922, the S.A.F. compelled the L. O. to agree to considerable reductions of the money wages, varying from 30 per cent to 50 per cent. In 1924 the crisis was over, and the Swedish crown had again reached gold parity. A number of relatively good years restored the labor market to fairly normal conditions and reduced unemployment but the frequency of labor conflicts unfortunately increased. The most threatening conflict occurred in 1925 when the S.A.F. declared a lockout in several industries—affecting over 100,000 workers; in less than two weeks, however, the lockout notices were withdrawn, the S.A.F. having successfully insisted on a simultaneous settlement for all industries involved. The gradual improvement in economic conditions brought about a moderate increase in wages but also new and extensive conflicts; the year 1928 in particular was one of serious labor troubles in several export industries. In 1931 the entire textile industry withstood a 2½ months wage attack. In 1933-1934 the builders fought successfully for 10½ months for reducing the excessive wages and for eradicating certain undesired practices.

• During the first twenty-five years after the two great central organizations were ready to face each other there was but little legislative interference. In 1906 the Riksdag, the Swedish Parliament, passed a Government Bill stipulating mediation in labor disputes which was supplemented in 1920 and 1931. Seven official mediators were appointed, one in each district, and Government Mediation Commissions have been appointed from time to time to effect settlement in more extensive conflicts. The only compulsion imposed on the opposing parties is that they have to meet for negotiations when duly summoned. This new institution was first received with certain distrust but in the past thirty years it has gained the confidence of the parties and become an integral part of the procedure. Under its influence, collective bargaining has steadily increased. However, the attempts to legislate for individual and collective labor agreements were for a long time futile. Following the general strike in 1909, a Conservative Government in 1910 and 1911 proposed legislation to govern both forms of agreement, but without success. Not until 1928 were laws enacted on collective agreements and on the establishment of a Labor Court (Arbetsdomstolen). One explanation of the delay was that the leaders of the L. O., appreciating their responsibilities, definitely opposed anything that was clearly a breach of agreement. A Government organization for dealing with legal questions arising from collective agreements, the "Central Board of Arbitration" (Centrala Skiljenamnden), was formed in 1920, but there was nothing to compel either party to refer disputes to it. Resort to direct action on purely legal issues could not be prevented. The collective agreement, as a legal institution, had no other means of redress than legal proceedings in the courts, which would take many years and consequently could not be used. In 1928 a liberal Government enacted legislation on collective agreements and on a Labor Court. The L. O. opposed this strongly though less on principle than because of the members' disapproval. However, since these laws came into force in 1929, the trade unions have—like the employers—made extensive use of the Labor Court. The participation of the L. O. in a Labor Peace Conference arranged towards the end of 1928 by the Conservative Government then in office, accorded better with its principles than its previous opposition had done. Cooperation continued for some time but its effects were chiefly of a psychological nature.

• The only other law which, up to recent years, has dealt with the relationship between industrial employers and workers is the so called Akarp Law, which was enacted as early as in the 1890's and was directed against any attempts towards employing illicit force in labor conflicts, e. g., the use of force by organized workers against parties not engaged in the dispute.

The most recent economic depression did not affect Sweden until the end of 1930. No extensive measures for adapting wages to the deteriorating business conditions were taken until the following year. Nominal wages were extensively reduced in the most important industries early in 1932. However, owing to among other things the abandonment of the Swedish gold standard, the reduction in real wages was fairly moderate and not as extensive as during the deflation crisis of 1921-1922. Some of these reductions were wholly or partly compensated for by slight increases as economic conditions improved (1935-1936).

During the 1930's intense preparatory work on labor legislation has been carried on, but so far the results have not been very extensive. A bill to protect "third parties" in labor conflicts, outsiders, or businessmen, functionaries, etc., who are not directly involved in a dispute, was extended to include stipulations when direct action should be deemed justified and lawful, stipula-

tion pertaining to economic disputes other than labor conflicts, and penalties under certain circumstances for cancelling employment contracts, leases, etc. The bill was rejected by the Riksdag. Another bill on private labor agreements containing stipulations regarding the period for giving notice, holidays, and payment during sickness was likewise rejected In 1936, however, a law was promulgated concerning the right to organize and negotiate with particular regard to foremen, engineers, clerks and shop assistants.

Private bills introduced in the Riksdag have demanded various measures to promote "labor peace" and some have gone so far as to demand more or less extensive compulsory arbitration. A Government Committee has among other things investigated the problem of securing peace in the labor market, but in the first place it has appealed direct to the organizations to agree on voluntary measures for the pacification of the labor market. For this purpose—and to make coercive legislation unnecessary — negotiations were commenced last year between the principal organizations of employers and workers—the Swedish Employers' Federation and the National Federation of Swedish Trade Unions. These central negotiations proceeded to the end of last year and has been resumed this year.

II. Causes and Effects

● The idea of labor cooperation sprung from the feeling of impotence on the part of the individual workman when confronted with the powerful industrial enterprises.

The trade unions soon came to exercise considerable control of the supply of labor. Under favorable circumstances they could deprive the large enterprises of the requisite labor thus forcing them to make concessions.

The enterprises, in turn, felt impotent as long as they could be attacked in this way one by one; and so the idea of cooperation arose among the employers.

When both sides were thus organized, the problems relating to working conditions had to be tackled in a different way than before; following negotiations the organizations now determined the essential working conditions, and the individual agreements between workers and employers had to be kept within the limits thus determined; if the parties could not agree on a collective agreement, open conflict ensued, as a rule on a widened basis in so far as tools were downed not only in one particular factory but in the whole trade; the manufacturers then suffered by not being able to utilize their costly and valuable production machinery, and the workers by having to do without their wages; whenever work could not be curtailed without great inconvenience and wherever possible, it was carried on with other labor; both organizations supported the combatants financially, and that party won which could hold out the longest; when public interests suffered, the Government appointed mediation organs for bringing about a peaceful settlement without interfering in any way with the full freedom of action of either party.

Much bitterness and enmity often resulted from these collective conflicts, especially as the conflicting interests were made matters of party politics; violence was sometimes resorted to, chiefly against "blacklegs" but attacks on property were very rare and no factories were ever occupied; the employers' organizations would certainly have flatly refused to negotiate with any opponents resorting to such unlawful action and would instead have demanded the assistance of the public authorities to turn out the intruders. Such assistance would certainly have been granted, for the Government was not too weak to maintain respect for the law.

● The ruthless struggle between the two organizations made them understand each other; it proved educative for both parties neither of which could fight the other without causing considerable damage to itself; the vital decisions that had to be made developed a sense of responsibility, and arms were no longer taken up for trifles or for the mere sake of hurting the opponent; the very negotiations compelled the parties to penetrate each problem and to learn to understand what was possible to achieve.

In the early days and before the employers were firmly organized the trade unions were often successful in their open actions; this gave them a sense of great power which occasionally resulted in misuse and undue aggressiveness. The employers' organizations soon grew stronger, however, and equilibrium was restored. In so far as the trade unions grew in importance, the firebrands and trouble-makers became more and more in the minority; for the ordinary Swedish workman is not generally inclined to hazard his future. Extended franchise and growing political power increased the influence of the workers on social legislation; a general interest in economic and political training produced good labor leaders and taught them to assume responsibility; they had to build up their organization gradually in the course of many years, without violent changes, and the employers' organizations also had to adapt themselves successively to the changed conditions.

● Nevertheless, the collective disturbances of the relations between employers and workers were by no means insignificant; frequently the collective agreements could not be settled without serious conflicts; and —what was worse—the peace which an agreement was supposed to guarantee as long as it was in force was often broken by disputes or threatening disputes during the term of the agreement; this could happen due to the lack of the law regulating the right of collective negotiations, and above all to the lack of an appropriate Court of Law to deal with disputes concerning the interpretation, application, and non-observance of collective agreements. This lack was remedied by the Law on Collective Agreements and the establishment of the Labor Court in 1928, which turned all questions of interpretation and application into points of law which could not be settled by open conflict but had to be solved by the Court. If a breach of agreement is committed, the party responsible is liable to pay damages; the open conflicts are therefore nowadays mainly restricted to disputes of new collective agreements, w o r k i n g conditions, wages and the like.

However, open conflicts even on such points are, of course, just as likely to injure production and, consequently, also financial and social interests of the parties and of Society; they have also a disturbing effect on the general relations between employers and workers; in recent years politicians and the Riksdag have therefore bent their efforts towards bringing about some sort of legislation by which such labor conflicts could be limited or prevented. The organizations of both parties are, of course, also interested in being able to limit these conflicts but at the same time they oppose any interference by the Government in regulating working conditions, and at all costs they wish to retain their freedom of action even at the price of occasional open conflicts. This is one of the reasons why the S. A. F. (The Swedish Em-

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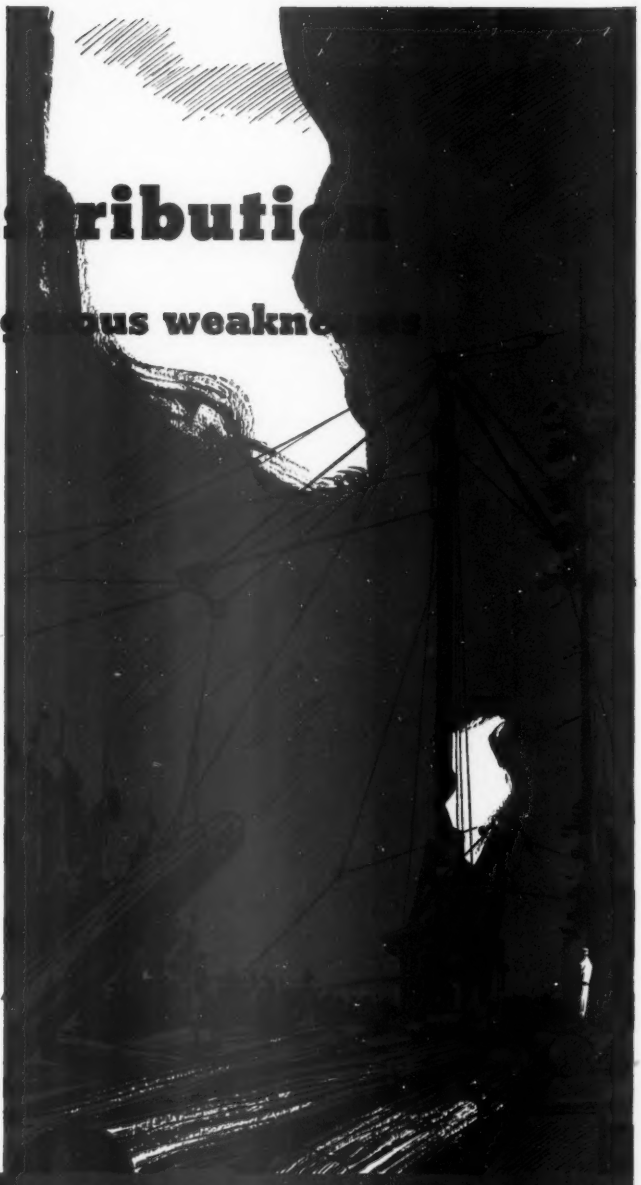

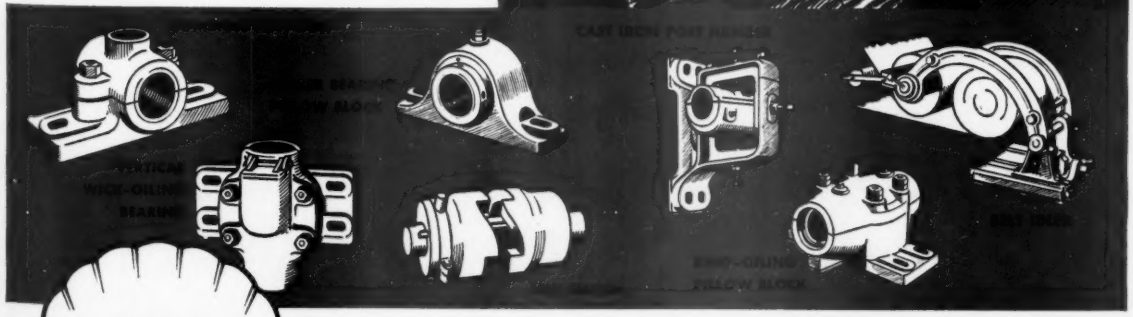

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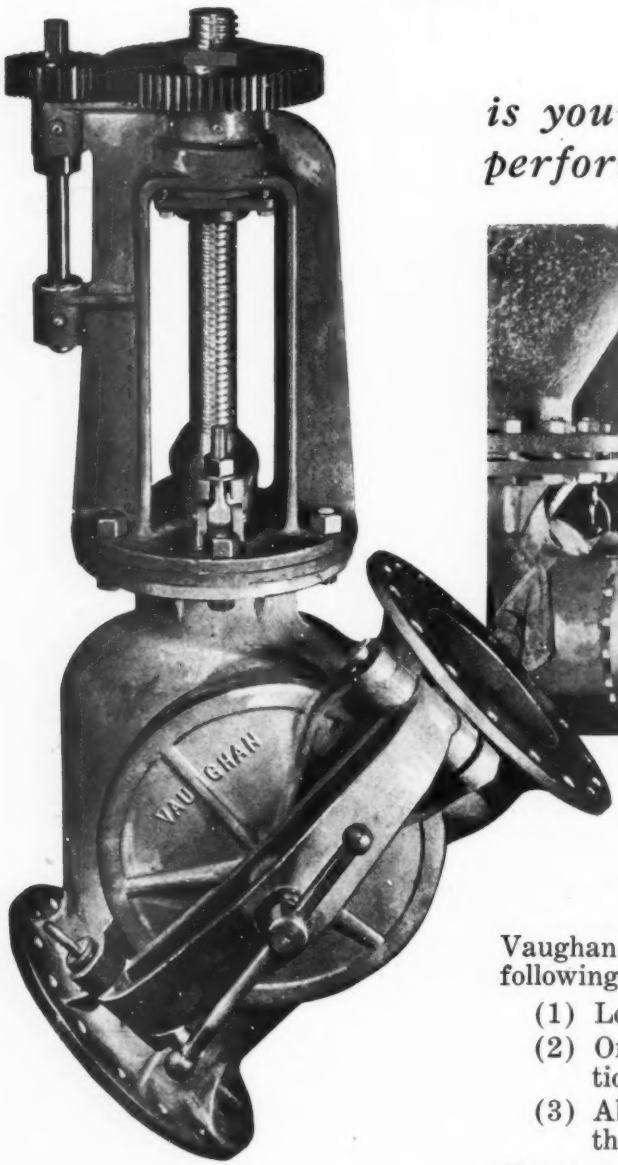

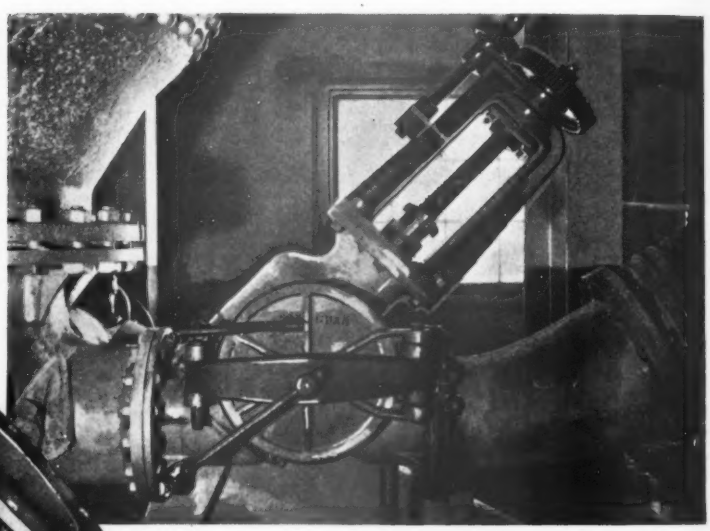

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ployers' Federation) and the L. O. (The National Federation of Swedish Trade Unions) in the Spring of 1936 agreed to appoint delegates to discuss these problems and to investigate the possibility of open conflicts.

III. The Present Situation

● Generally speaking, the present situation is characterized by the Swedish Employers' Federation, (S.A.F.) and the National Federation of Swedish Trade Unions, (L.O.) having complete confidence in one another, while at the same time they are fully aware of the difference in economic interests. These differences are of such a nature as to make it in general possible to overcome them without injuring either party by open conflict, in the same way as other divergent interests in economic life have to be reconciled by means of mutual agreements. In principle, however, and in order to defend their more important individual interests, both sides desire to retain full liberty to resort, if necessary, to direct action, which is regarded as an unpleasant but, due to differing opinions, an unavoidable means of reaching an agreement. The parties, or at least the central organizations, usually avoid carrying the conflict into the political arena; the inclination to do so was formerly more apparent as the more radical elements of the workers wished to use every opportunity to make the "class-war" more acute and to discredit the present economic system. The fight against the economic system is now confined to the political field, where the labor party is at present in a majority, but not even that political party wants to introduce any rash changes but rather prefers to make carefully deliberated and moderate changes in so far as circumstances may permit.

● One consequence of the parties' sincere wish to avoid open conflicts is that every issue of disputes as well as the general situation in the industry concerned are thoroughly discussed at the negotiations. As a rule, Swedish labor leaders are nowadays so familiar with these matters that they are well able to judge how much a given trade can pay in wages and, consequently, what prospects there are of attaining their aims. Prospective leaders of the workers' organizations are given a training which is both practical and theoretical. Courses are arranged by the L.O., which has also established schools for this purpose in which every effort is made to view economic problems as objectively as possible. The Managing Director of the Swedish Employers' Federation as well as other representatives of the employers have even been invited to participate in discussions at these schools and to give lectures there. The parties negotiate on an absolutely equal footing, whether before a Government mediation organ or not. Formerly, the intercourse between the parties could frequently be very unpleasant; arrogance and bitter invectives were not unusual and the conduct of the delegates left much to be desired. However, in the course of years this lack of courtesy has disappeared and nowadays negotiations between the parties in the labor market are about as friendly and pleasant as at any other business meeting. Neither side can gain by insults and abuse.

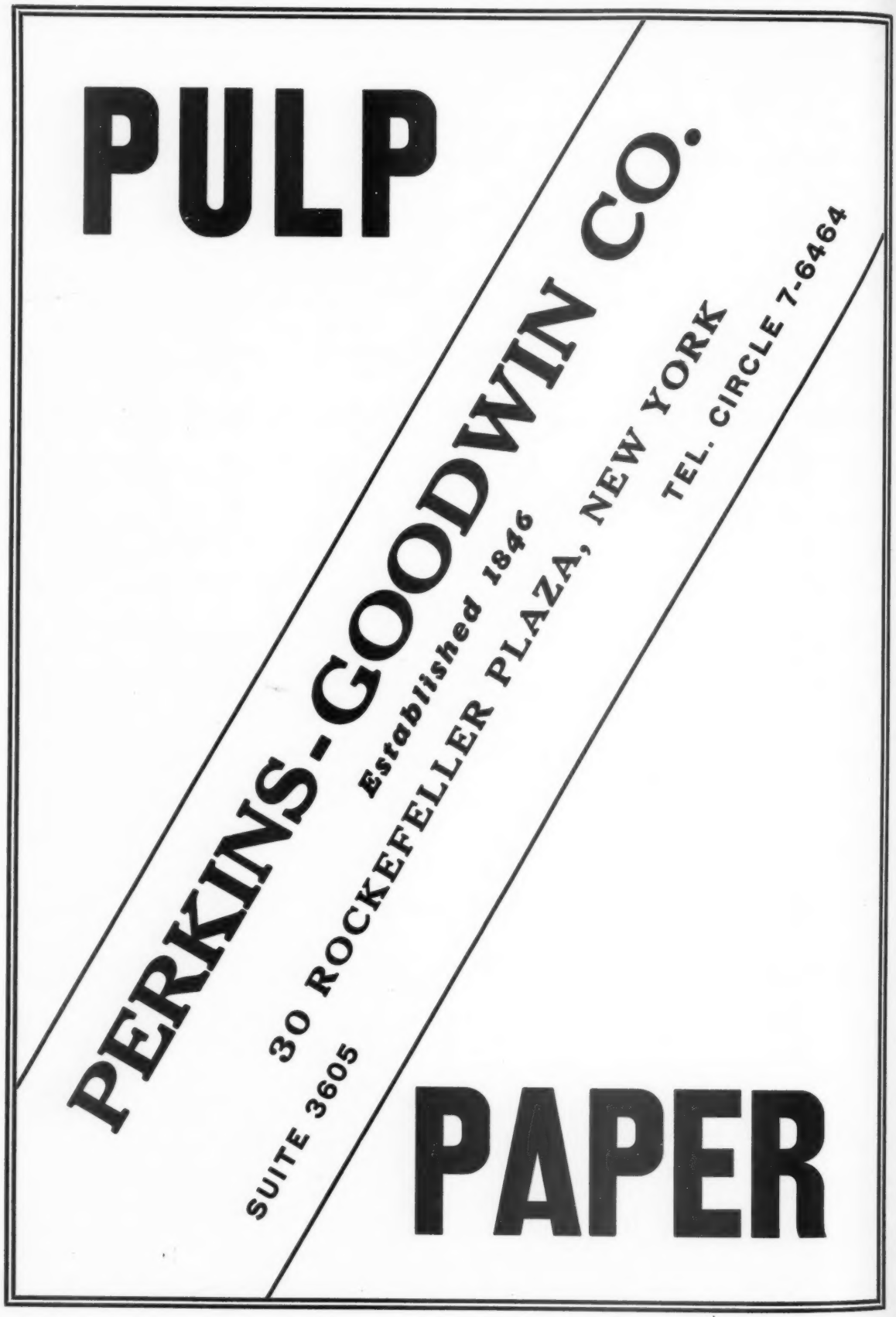
What has been said above applies primarily to the undoubtedly largest and most important organizations in the labor market, the S.A.F. and the L.O., and to the federations affiliated with them, but it may apply also to the others, excepting the rather unimportant syndicalistic labor organizations. While about 750,000 workers now adhere to the L. O., the syndicalists have only about 33,000 organized members.

An open conflict may be caused either by the laborers refusing to work or by the employers refusing to employ the workers. The dispute may involve one or more establishments that cannot agree with their workers, or it may involve whole trades or industries that cannot come to terms on a new collective agreement. Its extent will depend on how comprehensive is the collective agreement. However, a dispute may spread from the establishments directly concerned to other fields which by their organizations or otherways are suitable for bringing pressure on the parties to the primary dispute. Such "actions-of-loyalty" may also extend to industries where collective agreements are in force. Consequently, agreements of this nature cannot always guarantee labor peace.

● The employers have several ways of dealing with an open conflict. In the first place they may, of course, continue work with other laborers if any are to be found willing to work on the conditions offered by the employer. This was more easily done formerly when there was plenty of unorganized labor available, but it is practically impossible now when most competent laborers are organized. It might still be feasible where only one or two enterprises are concerned but not where a whole industry is involved. Certain kinds of work, e. g., in the harbors, are of so great importance to industry in general that they must continue whether there is a conflict or not. Labor must then be procured wherever possible, even though it may be very expensive and at the same time less efficient. But this is not the usual way of conducting an open conflict. Instead, work is simply stopped until lack of income finally compels the workers to agree to a settlement. In the meantime, the employer will of course also lose money, and the S.A.F. was therefore from the first organized so as to be able to some extent to compensate its members for losses of this nature. But also the trade unions are giving their members financial support, and a conflict will consequently in the long run be a financial tug-of-war between the organizations.

According to the Statutes of the S.A.F. the compensation paid to the Associates amounts to one Swedish crown per day and worker for the first three months of a conflict, and thereafter to two Swedish crowns. Beyond this, the S.A.F. may also grant extra compensation according to the circumstances in each case. The S.A.F. has always—at least in recent years—felt at liberty to adjust the compensation fairly well to the damage suffered, according to the circumstances, though the enterprise itself is always expected to bear a considerable portion of the loss. In order to be able to assist members effectively, the S.A.F. must acquire sufficient funds, and for that purpose it collects a suitable annual fee from its members. The fee is at present twenty Swedish crowns per year and worker; the aggregate number of workmen employed by its members is at present about 325,000, and its cash funds total about twenty million Swedish crowns.

In order to secure discipline and cooperation among its members, especially during conflicts, the S.A.F. can exact a heavy penalty from any member breaking the Statutes or failing to comply with a statutory decision of the Board. This is of great importance when anybody enters into a collective agreement that cannot be accepted by the S.A.F. or refuses to join in a lockout ordered by it. The maximum penalty is 200 Swedish crowns per employed worker.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PAPER

Coast News Print Price $50

Crown Zellerbach announces $50 price— Powell River reaffirms earlier announcement

News print price structure on the Pacific coast will be maintained in accordance with the figure announced last summer—$50 a ton for the first half of 1938, despite the action of Great Northern Paper Company in setting $48 as the price in the New York base zone.

Powell River Company and Crown Zellerbach Corporation announced this month that they would stand by the $50 a ton rate for the first six months of next year, an increase of $7.50 over the prevailing $42.50.

● When news of Crown Zellerbach's decision was transmitted to Harold Foley, executive vice-president of Powell River Company at Vancouver, he said that there was no reason for another announcement by Powell River inasmuch as it had announced $50 a ton as the base price some months ago, but he unhesitatingly reaffirmed this position.

Mr. Foley pointed out that Powell River Company had made an agreement with all its contract buyers based on the $50 rate and that even if Great Northern had advanced its price to $52, Powell River would have upheld the price originally set, $50.

"Fifty dollars a ton doesn't mean as much to the news print mills now as it did several months ago when the increase was announced," said Mr. Foley. "But it marks a step in the right direction, and doesn't make too much of a jump for the publishers. News print consumers should be able to absorb an advance of $7.50 a ton without serieous dislocation. Any price advance less than that would be foolish for the news print operators."

● Mr. Foley explained that wages in his company alone had increased more than 20 per cent already since the beginning of this year, and a further increase in wages will bring about a 27 per cent raise from last year's scale by the begininng of next year, when the new price becomes effective. In addition, the mills have been paying more for equipment and materials, and there has been no reduction in taxation.

The same situation pretty well applies to Pacific Mills, Ltd., the Crown Zellerbach Corporation subsidiary at Ocean Falls, B. C., with converting plant at Vancouver. Pacific Mills will, of course, abide by the $50 a ton policy.

Crown Zellerbach Corporation made its price announcement in this form:

● "We have today mailed to our contract customers an announcement fixing our price for the first six months of 1938 at $50 f.o.b. docks, Pacific coast ports."

In response to enquiry, the company had stated a few days previously:

"Our news print contracts are not governed by Great Northern, nor will they be influenced by the latter's recently announced prices. The views on news print stated in our annual report to stockholders, dated July 12, are unchanegd. We prefer to make no public announcement of our 1938 prices until we send formal notice to our contract customers."

● So far Great Northern is the only major news print mill offering to sell at less than the $50 base. West coast paper men say that in view of Great Northern's proximity to its market, the $48 specified in its contracts is really no less than the $50 as applied to other mills further from their customers. Even Great Northern has agreed to raise its price to $50 for the second half of 1938.

Until several of the biggest news print producers in easetrn Canada had definitely reaffirmed the $50 price there had been a feeling that some of the mills would back down, as they had in the past, following lower price announcements in other years by Great Northern and International. Such companies as Price Brothers, Abitibi and International lined up for $50, however, and most of the uncertainty vanished.

● Price Brothers announced that it did not accept Great Northern as a price criterion "because its entrenched financial position apparently afforded it sources of income not available to the normal news print producer to whom a price of $50 a ton is now a barely livable level."

Price Brothers added that there was every evidence of a necessary increase during the second half of 1938 because of "a continued advance in all our expenses."

● President R. J. Cullen, president of International Paper Company, largest news print producer on the continent, stated:

"All costs entering into the production of news print are still increasing. While International is not in a position to announce a price for the second half of 1938, its policy of naming a price as far in advance as possible will be continued."

● L. J. Belnap, president of Consolidated Paper Corporation, one of Canada's largest news print operators, said he could not see how "a reasonable increase" can be avoided for the second half of next year.

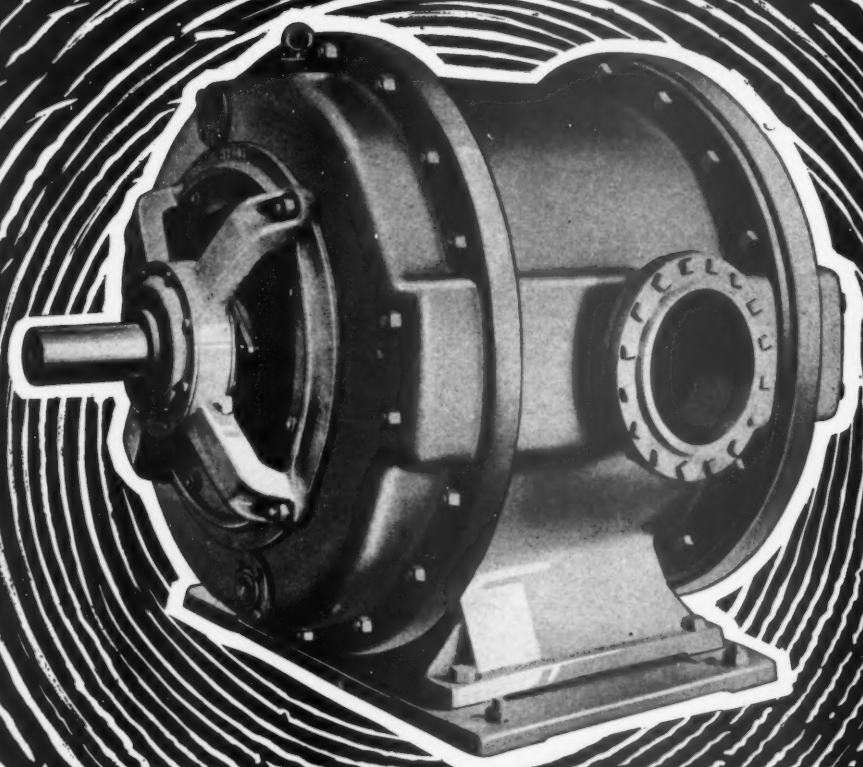
Great Northern's action in "cutting" the price was interpreted in the east as not being based on costs of manufacturing and a reasonable return on capital, as much as a move on the part of the company to consolidate further its position with the American publishers. The publishers have been benefitted immeasurably by Great Northern's price policies during the past two years.

As a matter of fact, many news print operators in Canada had expected that Great Northern would set $45 or $47.50 per ton as a price instead of $48.

● Meanwhile news print mills are taking action to prevent over-production. Price Brothers and Canadian International have adopted a five-day week until such time as the stocks are brought down to "reasonable proportions." Other mills will close down a few machines. So far as announced, Pacific coast mills will not be affected. The market situation here has been entirely different from the east's and at no time has there been a serious surplus of production, even with the mills operating at capacity.

There is no telling how long production will be curtailed in the east. Present indications are that Canadian news print production, exclusive of the coast mills, will be down from 10 to 20 per cent for the balance of the year, compared with the corresponding period in 1936. This

Centralized Paper Mill Economy



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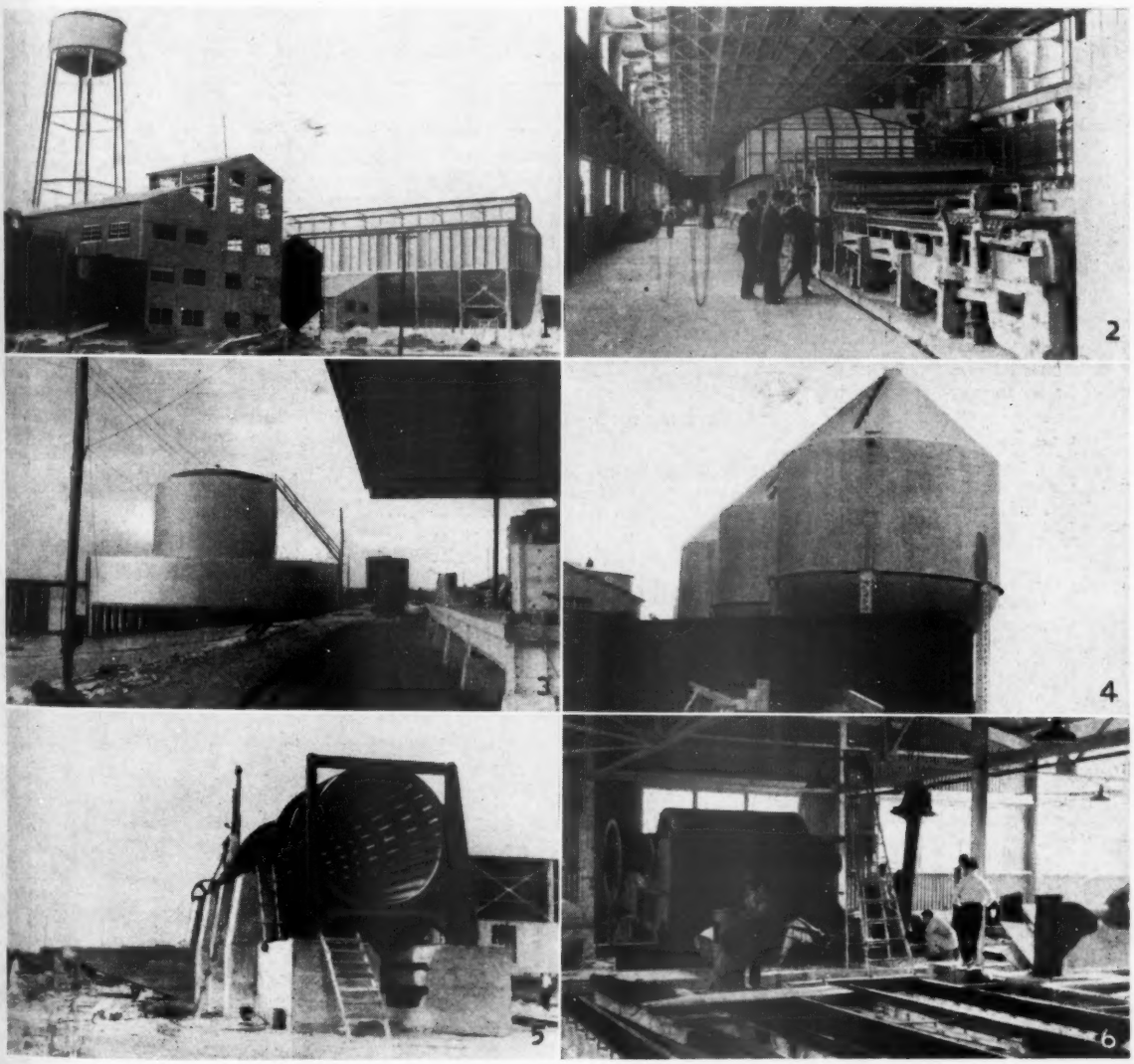
should mean that manufacturers are going to keep a close watch on deliveries to news papers, which have been accumulating in anticipation of a price advance. Publishers' stocks will be larger than ever before at the end of the year, according to present signs.

● American Newspaper Publishers Association resents the attitude of the major news print mills in setting a higher rate than Great Northern, and in a recent statement declared: "This announced program of Canadian mills provides the final and clinching reason, if it were needed, to convince United States publishers of the vital importance of placing a major proportion of their news print purchases with mills operating within the United States, from overseas mills not bound by cartel agreements with Canadian manufacturers and giving substantial support to the early development of news print manufacture from the southern states."

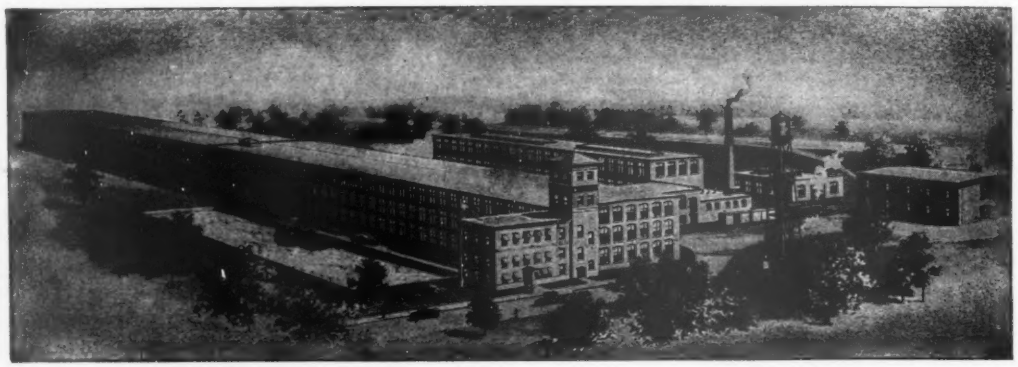
Pacific Coast Supply Showing Heller Merz Picture

A talking motion picture in colors, entitled "Beyond the Rainbow," produced by Heller & Merz, division of Calco Chemical Co., has recently been shown to Pacific Coast mill men by Messrs. Mears and Marshall of the Pacific Coast Supply Co.

The first showing was at Oregon City for the Hawley Pulp & Paper Co. on Oct. 28. Later it was shown to various interested groups in pulp and paper mills at West Linn, Camas, and various other mills. It was one of the program features at the TAPPI meeting in Port Angeles on Nov. 9.



BRUNSWICK PULP & PAPER COMPANY pictures taken at the time of the TAPPI convention in Savannah, October 18-20th » » » OTTO C. SCHOENWERK designed this 150 tons per day bleached kraft pulp mill at Brunswick, Georgia and is supervising construction » » » No. 1, digester building with chip storage building at the right » » » No. 2, the Rice, Barton & Fales pulp drying machine » » » No. 3, large fuel oil tank » » » No. 4, salt cake storage tanks » » » No. 5, barking drums » » » No. 6, Oliver washer and Impco flat screens » » » Construction will be completed at the end of the year.



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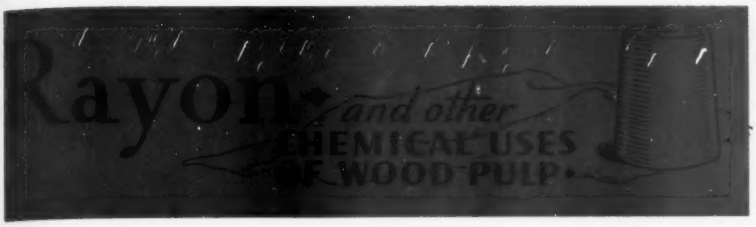

Viscose Staple Fiber Price Reduced

In mid-September one of the large viscose process staple fiber producers reduced the price of this product 3 cents per pound, and this change was followed by other domestic producers according to the Rayon Organon. It should be clearly understood that this price change had nothing to do with the price of filament rayon yarn, which remained unchanged.

The list price history of viscose staple fiber in the United States as exemplified by 1½ inch, 1½ denier viscose process staple over recent years is as follows in dollars per pound: January, 1928, $0.60; October, 1931, $0.50; August, 1932, $0.40; February, 1934, $0.34; June, 1936, $0.28; and September, 1937, $0.25. These prices are for bright viscose staple fiber; dull staple is 2 cents per pound additional. Prices are f. o. b. point of shipment, minimum freight allowed to destination.

According to the Rayon Organon, one of the apparent reasons for this price reduction was the passing on of producer's production efficiency and lower costs due to the increased volume of business done over the past few years, a phenomenon typical of the early stages of the domestic rayon yarn industry. A further cause probably was a desire on the part of this domestic producer to narrow the spread between the price of his product and the price of the imported Japanese staple; although inferior to the domestic staple in quality, nevertheless the Japanese staple at 22 to 24 cents per pound in this market was at a distinct advantage compared with the American staple. In any event, it is clear that the new 25-cent price will put the domestic staple in a much more favorable bargaining position with the imported staple in the American market.

Rayon Yarn Demand And Prices

"Analyzing the rayon yarn picture for the remainder of 1937 strictly from the data," says the Rayon Organon for October, "we can see some curtailment in production, a Fall bulge in demand of less-than-normal-seasonal proportions, and some further accumulation of stocks in the hands of producers. No yarn price change is anticipated. It will be a period in which producers can balance out their stocks as between various deniers and sizes for the first time in over a year.

"The tendency to compare rayon price and consumption with cotton undoubtedly is being overdone. While it is true that cotton prices and consumption increased substantially and then contracted over the past year, rayon has had no such experience. In price, the rayon increase was very moderate and the consumption of rayon during the period perhaps fortunately was held down by the lack of available yarn. On the basis that these rayon factors of price and consumption did not increase immoderately, they likewise will not have to decrease unduly, a situation quite different from cotton and wool.

"The element of rayon yarn costs also may be examined to advantage. The new 1938 wood pulp contracts are being placed now at a price $25 per ton or 1½ cents per pound (including losses) above this year's price (new price reported to be $95 per ton—Ed.). Other rayon raw material prices similarly are tending upward.

"On the labor side, the government's figures show that wages per rayon worker in August, 1937, were 19 per cent larger than those in August, 1936, and 25 per cent greater than those in August, 1935. With labor costs comprising something more than one-third of the total rayon production cost, the importance of this one factor alone in higher costs can be seen. These factors of higher cost indicate yarn price stability, if not an actual price increase."

Japanese Staple May Attain 282% Increase

With an average monthly production so far this year of 14,500,000 pounds of staple fiber, total Japanese production for 1937 may reach 175,000,000 pounds as monthly production is increasing. This would be 129,150,000 pounds greater than the 1936 staple fiber production of 45,850,000 pounds.

In 1935 Japanese staple fiber production was but 13,625,000 pounds.

Japanese Rayon Exports Down in August

Rayon yarn production by member mills of the Japan Rayon Association during August amounted to 28,879,400 pounds, compared with 29,467,600 in the preceding month, a decline of 5,882,000 pounds. Preliminary reports indicate that rayon-yarn exports in August totaled only 3,600,000 pounds valued at 3,100,000 yen, representing sharp declines of about 33 per cent in both volume and value compared with July shipments of 5,391,000 pounds valued at 4,637,000 yen. The cumulative total of exports of rayon for the 8 months ended August, 1937, approximated 34,700,000 pounds valued at 28,400,000 yen.

Rayon-fabric exports in August declined to 33,600,000 square yards valued at 11,600,000 yen, a decline of 16 per cent in quantity and of 15 per cent in value compared with July shipments of 40,514,000 square yards valued at 13,737,000 yen. For the 8 months of 1937, rayon fabric exports were about 313,750,000 square yards valued at 100,450,000 yen. (Exchange value of yen equivalent to $0.2888 in July, $0.2903 in August, $0.287 in the 8 months ended August, 1937, and $0.291 in January-August, 1936. Warehoused stocks of rayon yarn at the end of August totaled 219,565 cases of 100 pounds each), an increase of 35,882 over stocks at the end of July. (Radiogram, received Sept. 27, and earlier reports from Commercial Attache Frank S. Williams, Tokyo.)

Japanese Rayon Cost Reported Rising

It is reported that the costs of producing rayon and staple fiber in Japan are rapidly rising. It is estimated that, whereas the cost of producing rayon staple fiber early in 1937 averaged about 49 yen per 100 pounds (14 cents per pound), this cost by the end of 1937 will total 67 yen (19 cents per pound).

Hebbs Makes Annual Coast Visit

Lewis Hebbs of the firm of Cross & Bevan, consulting chemists of London, England, made his annual visit to the Pacific Coast in October.

Cross & Bevan originated the viscose process of rayon manufacture in 1892 and ever since have been active in consulting work in the rayon and pulp industries throughout the world. Mr. Hebbs spends approximately eight months of each year travelling in the interests of Cross & Bevan's clients who are located in those countries where rayon pulp and rayon are produced. Mr. Hebbs' work is not confined to the viscose process nor to the manufacture of pulp for the viscose rayon spinners, but embraces the production of cuprammonium and acetate yarns as well.

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Germany Increasing Dependence on Staple Fiber

The textile industry in Germany is becoming increasingly dependent upon staple fiber to supplement its imports of raw materials, such as cotton and wool, which have been restricted by the various import and exchange control measures of the German government. Press reports state that in January of this year, demand for staple fiber constituted about one-sixth of the total demand for spinning materials, but in May the proportion of staple fiber had risen to one-fourth of the total. Official foreign trade statistics have shown staple fiber, semi-manufactures, and manufactures as a separate group since May, 1937; imports of the group totaled 4,576 metric tons valued at 5,448,000 reichsmarks ($2,190,000) during the first half of 1937, while exports amounted to only 875 metric tons valued at 1,929,000 reichsmarks ($775,000).

Raw staple fiber was by far the most important item in the imports of this group, accounting for 3,288 metric tons valued at 3,704,000 reichsmarks ($1,489,000), of which Italy, the outstanding supplier, furnished 3,085 metric tons. Other sources were the United Kingdom (76 metric tons), Switzerland (59), and Belgium (36). Imports during the first 6 months of this year of "staple fiber and rayon waste" amounted to 814 metric tons valued at 726,000 reichsmarks ($292,000) chiefly from Belgium, Italy, the United Kingdom, and Switzerland, while imports of staple fiber yarn and thread, totaling 460 metric tons valued at 993,000 reichsmarks ($399,000) were received in important volume from Czechoslovakia, Italy, and Switzerland.

Exports of staple fiber amounted to 459 metric tons valued at 810,000 reichsmarks ($326,000), of which Switzerland took 129 metric tons, Hungary 118, Czechoslovakia 44, and the United States 41 tons. The only other item of any considerable significance in the group was "staple fiber yarn and thread," exports of which totaled 295 metric tons valued at 655,000 reichsmarks ($263,000), which included 73 metric tons to Austria, 62 to Yugoslavia, 44 to the Netherlands, and 41 to Hungary.

Rayon purchases by Germany from its 3 chief sources of supply were lower in the 1937 half year, imports from Italy dropping to 1,252 metric tons, from 1,789 in the first 6 months of 1936; imports from Netherlands were 530 tons, against 596; and from Switzerland 352, against 610 metric tons in the 1936 half year. German exports of rayon declined by almost 23 per cent in volume and 34 per cent in value, as compared with shipments in January-June, 1936. Germany's best customers for rayon were Hungary, Yugoslavia, Czechoslovakia, Rumania, and Sweden, in the order named, with purchases ranging from 795 metric tons to 228 metric tons.

Japan To Mix Staple Fiber With Wool

A recent report from Japan states that the government has asked the Japan Woolen Manufacturers Association to substitute rayon staple fiber for wool to the extent of 40 per cent of their annual consumption. The purpose of this request is to reduce the yen exchange requirements for imported wool.

The woolen manufacturers feel that, with the very adequate present manufactured and semi-manufactured wool stocks on hand, they will need to import only 600,000 bales (500,000 from Australia and 100,000 from other countries, by treaty), and that total requirements might run to 800,000 equivalent bales next season. On this basis, and with the government's request to use 40 per cent rayon staple, the staple requirements would be 300,000 bales. With these bales weighing say 180 pounds each clean basis (300 pounds each greasy basis), this would mean a rayon staple fiber market of 55,000,000 pounds. Rayon staple today is being produced in Japan at the rate of about 175,000,000 pounds per year.

Transparent Cellulose Industry Expanding In Japan

A new cellophane manufacturing concern known as the Nippon Film Kogyo has completed its installation of equipment for the manufacture of transparent cellulose sheeting at a plant in the Shiga prefecture, according to a report appearing in the Daily Industrial News Service of May 5. The proposed output of the new plant is 2,500 reams per month. Another concern, the Tokyo Cellophane Company, Ltd., started production at its new plant at Oji, on the outskirts of Tokyo. When the entire plant extensions are carried out this company will have a capacity of approximately 1,500 reams per month. Three other companies are now in a position to enter into the production of transparent cellulose sheeting. The Nichiman Cellophane Company, one of the latest to enter the field, will shortly put into operation its mill at Miye prefecture, with a designed capacity of 5,000 reams a month. The second plant of the Takasaki Cellophane Company in the Saitama prefecture expects to put a machine in production with a capacity of 800 reams per month in the near future. A second machine will also go into service early in autumn. The Showa Chemical Industrial Company, which was compelled to suspend operations because of the unfavorable conditions last summer, is now ready to resume activity aided by financial support of the powerful Okura Shoji Kaisha. This concern aims at a monthly production of 2,000 reams at its plant in the Aichi prefecture.

The formation of the joint guild last summer is held responsible for the decided improvement in the Japanese transparent cellulose industry. On August 3 the Okuyama News Service reported that the Cellophane Joint Sales Guild had decided to reduce production of transparent cellulose sheeting by member companies during August by 16,000 reams, in view of the increasing stocks held by the member companies. The official monthly production limit theretofore had been fixed at 18,000 reams per month. The Guild was also reported to be preparing to make an extensive investigation of prospective foreign markets for transparent cellulose sheeting in an attempt to make up for possible losses on the Chinese market.

The Guild on July 15 had applied to the Ministry of Finance for permission to make joint imports of rayon pulp on behalf of the member companies of the Guild. As reported by the Okuyama News Service, annual consumption of pulp suitable for the manufacture of rayon and transparent cellulose sheeting amounts to about 9,400 metric tons. Upon completion of the production facilities now being undertaken, the annual consumption of pulp is expected to advance to about 15,000 metric tons.

In presenting their position to the Ministry of Finance the transparent cellulose sheeting manufacturers stated that the operation of the exchange control had been crippling the smooth supply of pulp for their industry. The transparent cellulose sheeting industry estimated that at the end of June they had on hand sufficient supplies of pulp to meet the demand for July and August, and purchase contracts on hand for about 1,450 tons more. They pointed out, however, that imports of pulp suitable for rayon and transparent cellulose sheeting production in and after November will be attended by many difficulties unless proper measures are taken.—Assistant Trade Commissioner Carl H. Boehringer, Tokyo.

Port Alice Mill Making Rayon Pulp

The Port Alice mill of the British Columbia Pulp & Paper Company switched to rayon pulp from bleached sulphite for paper making on September 10th and will make nothing but rayon grades for the balance of the year.

Bob Young Visits Portland

Robert Young, assistant manager for Pacific Mills, Ltd., at Ocean Falls, was a visitor in Portland recently while on vacation.

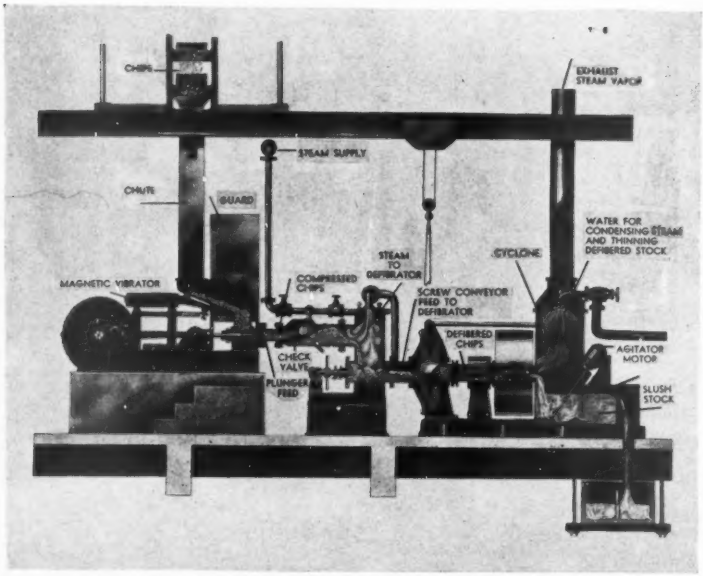
A. D. Merrill Coast Visitor

Albert D. Merrill, vice-president of Chemipulp Process, Incorporated of Watertown, New York, was a Coast visitor in October, spending several weeks calling on sulphite mills.

Mr. Merrill inspected the large number of Chemipulp installations on the Pacific Coast. While making his mill visits he was accompanied by A. H. Lundberg of Seattle, Pacific Coast representative for Chemipulp Processes, Incorporated.

A. D. MERRILL
Visits Chemipulp Users

the DEFIBRATOR



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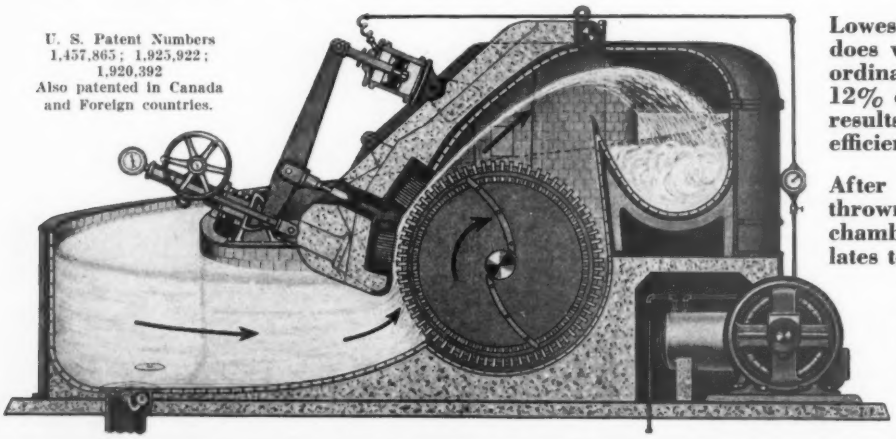

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Log Exports Arouse British Columbia

Legislation proposed to stop increasing exportation of logs

British Columbia intends to do something about the export in increasing volume of pulpwood logs to the Orient, but just what that something will be is still a matter for conjecture, despite the assurance of Honorable A. Wells Gray, provincial minister of lands, that action will be taken during the present session of the legislature.

What finally brought this statement on the subject of log export from a member of the government was the announcement that Nippon Soda Company had decided to log its timber lands acquired last spring near Port Harvey, northeastern Vancouver Island, and ship direct to Japan in the form of logs.

The Japanese company has been calling for bids from various established British Columbia logging companies to do the job. It has no intention of organizing its own logging operations.

● Permits from the Japanese government have been obtained by Nippon Soda Company, one of the largest rayon manufacturers in the Far East, for the shipment of up to 60,000,000 feet of logs annually, which is nearly twice the amount Japan bought in the British Columbia market altogether last year. Cedar and a small quantity of fir in the Vancouver Island tract will be sold in the open market in British Columbia, but most of the timber is hemlock and balsam, suitable for pulping, and all this will be shipped to Japan unless some means of restriction is applied.

Nippon Soda Company's timber is on Crown grant property and the provincial government has no control over exports from such areas, although it does have authority to regulate exports from other areas. A Crown grant is regarded as inviolable as a bond and to interfere with the owners would be tantamount to repudiation. Much of the timber held by Japanese on the Queen Charlotte Islands is not Crown grant and is therefore subject to export restriction.

Although authorized by Japan to ship three times that amount, it is understood in Vancouver logging circles that Nippon Soda will content itself with a total annual export at first of only about 20,000,000 feet. Regardless of the volume, the move represents the first step by Japanese owners to "liquidate" their timber holdings in British Columbia. Incidentally, it indicates that the Japanese have no intention of establishing mills on this side of the Pacific, shipping pulp instead of wood to Japan. Earlier in the year it had been rumored that the Japanese would establish such a plant on Vancouver Island, and the soaring freight rates lent strength to that theory. Apparently, however, the Japanese are interested only in the raw material and have no desire to establish industries outside their homeland.

● Growing unrest in the Orient and the antagonism between British and Japanese interests, apart altogether from the principle of exporting raw logs, are strengthening public opinion against the practice of denuding British Columbia forests for the almost exclusive benefit of foreigners. The large-scale development of log exports to Australia—last year they totalled 73,000,000 feet—was deplored. The shipment of many times that amount to Japan now threatened is regarded as far more serious.

Legal authorities do not see that the British Columbia government can do very much about Crown grant timber already disposed of, although some means of taxing exports might be adopted, and regulations might be made effective limiting sale of Crown grant timber to Canadians or naturalized British subjects.

● At any rate, the whole situation of log exports appears to be nearer a definite show-down than ever before, and a new statement of policy may result from the legislative session now in progress at Victoria. Several members of the house have already placed themselves definitely on record in favor of action that would halt the further shipment of raw logs to the Orient.

In an editorial on the problem the Victoria, B. C., Times stated:

Japan and Our Pulpwood

"Latest figures on the production of news print in Canada make us realize why Japan's order lifting after October 1 all duty on wood imported for the manufacture of pulp should be viewed with some concern. Especially at this time when Japanese interests have secured extensive Crown granted timber limits on Vancouver Island from which the provincial government is powerless to control the export of raw logs.

"The Japanese acquisition of these limits appears to be shrouded in mystery. It has been accomplished through Canadian incorporated companies. That these plans are being fostered from Japan is evidenced by the raising of the tariff barriers to permit the export of the raw material for manufacture in Japan.

"For years Canada has stood unchallenged as the top news print and pulp manufacturing country in the world. It is a business that has been growing steadily. Our news print production has grown from 3,830,000,000 pounds in 1932 to 6,384,000,000 pounds in 1936. Our wood pulp export business in three years has risen from 1,211,282,000 pounds to 1,508,993,000. Every avenue should be searched to nip in the beginning a move that carries any kind of threat against the ranking position Canada now holds in this industry."

Oriental News Print Situation

News Print shipments direct to China ports have been suspended for several months due to the war with Japan, but regular cargoes have been going to Hongkong and a large proportion of that business has ultimately found its way to Canton. The amount of news print that has moved farther north into China remains a mystery and will probably never be known definitely.

So far, however, there has been no indication of serious paper shortage in China, although publishers have been obliged to restrict the size of their publications. Evidently there were heavy stocks on hand when the hostilities started and the blockade became effective.

Officials of Powell River Company denied reports that, due to war conditions and inability of China to accept delivery, news print previously ordered by Chinese had been disposed of in other markets.

"A contract is still a contract, regardless of the war," stated William Barclay, manager of Powell River Sales Company. "News print sold to China and so far undelivered is being held for China."

Japan is still buying news print from Canadian mills, subject to government permit, as Tokyo is keeping a close check on the money spent outside Japan. News print, however, is one of the important commodities on Japan's preferred list.

Snow Man

Some manufactured products are like snow men . . . pretty to look at but of poor lasting qualities under the hot sun of hard usage.

Definitely not snow men are the many products of the Black-Clawson-Shartle organization. If one characteristic describes the up-to-the-minute B-C-S products, it is that of rugged strength.

Check into this ability to "stand up." You will find that it . . . in addition to stellar performance . . . has much to do with the ever-increasing sales of Miami jordans, Rotobeaters, Tugboat Annies, B-C wet-ends and Fourdriniers.

BLACK-CLAWSON and SHARTLE BROS.

Bob Petrie Returns to Coast

R. T. Petrie of Portland, Oregon, Pacific Coast representative for the Bagley & Sewall Company of Watertown, New York, returned at the end of October after a month's trip which included visits at Watertown and York, Pennsylvania.

Mr. Petrie said upon his return that Bagley & Sewall were busy with the building of new machines and with modernization work for a large number of paper mills. He visited a number of paper mills in Northern New York and attended the meeting of the New York-Pennsylvania Division of the American Pulp & Paper Mill Superintendent's Association at York, Pennsylvania.

Upon his return to the Coast Mr. Petrie went to Port Alice, B. C. to supervise the installation of a new Bagley & Sewall vat on the British Columbia Pulp & Paper Company's pulp drying machine in that mill. Production of rayon pulp at Port Alice began in September.

Port Mellon Shut Down

Port Mellon Operating Company, a Leadbetter kraft pulp and paper mill on Howe Sound, closed down again in September when it was found impossible to obtain sufficient credits from Japan for shipments to the Japanese market. Unrest due to war conditions has temporarily closed what appeared to be the company's best outlet for pulp, and high freight rates have discouraged buying in other markets.

Weyerhaeuser Lab. Studying Preservatives

In the research laboratory of the Weyerhaeuser Timber Co., Longview pulp division, Raymond Hatch, research director, has recently installed impregnating equipment in order to study the properties of various wood preservatives.

Austrians Establish New Insulation Board Plant

A new plant for the production of wood fiber was established at "Kapfenberg Einod" in the province of Styria. The manufacture is licensed by the patent rights of the "Fahrny Syndicate" in Zurich, Switzerland. The raw material for this production consists mainly of thin fir wood and soft wood waste. These are treated similar to pulp wood, which means a good utilization of lumber waste. Such insulation panels are also manufactured in Sweden and the United States on a large scale and constitute very good building and insulation material.

The plant will have a daily capacity of 1,250 square meters, or 11,613 square feet. Actual production so far is lower and is estimated at about half of the full capacity. Up to the present such wood fiber insulation slabs were imported from several foreign countries, including Finland and the United States. It is expected that these imports will now be replaced gradually by the local production. The plant was established by a group of Austrian engineers and businessmen, and no large company already established is participating to an outstanding extent. (Office of the Commercial Attache, Vienna).

Spaulding To Resume Late This Month

The Spaulding Pulp & Paper Company plant at Newberg, Oregon, shut down Oct. 23 for a short period. It is expected that operations will be resumed late in November.

The November and December business of Japanese customers has been postponed, to be picked up in January and February, according to mill officials, but there has been no cancellation of these orders as reported in the daily press, they say.

James Wilt, mill superintendent, flew east the latter part of October, and returned to Newberg early this month after a business trip of several weeks.

Wood Fibre Bleach Plant Nearly Ready

British Columbia Pulp & Paper Company's new bleach plant building at Woodfibre is structurally complete, although some of the equipment has not yet been installed. Operation will probably not begin until the end of the year.

One interesting feature of the building is that it will be absolutely windowless. The idea is to have artificial light all the time so that cloud effects and sunshine will have no effect on the color of the pulp being produced. Dimensions of the building are 120 by 64 feet and sixty feet high.

Two new turbines have been installed and both are running, one being of 1000 kilowatts and the other 600 kilowatts.

Camas Paper School Under Way

The paper school held by the Crown Willamette Paper Co. opened fall courses at Camas, Wash., on October 26. Four courses are being offered both for beginning and advanced students. Classes are held one night each week.

Although this is the fifth year of the school, enrollments in the classes are still large. There are 100 students in the first year course, 45 in the second year, and 40 in the third and fourth. Six of the students are from the company's mill at West Linn, Ore.

An innovation in the instruction this year is the use of motion pictures, showing action pictures of each unit of mill operation. Another feature of this 16-week session is the emphasis being put on the third and fourth year advanced courses. In placing particular stress on these classes, an effort is being made to give even more substantial training than ever before. A fine group of outside speakers has been selected for the meetings, as usual.

W. R. Barber is principal of the school, and A. G. Natwick is dean.

Raymond Hill Married In October

Raymond P. Hill, president of the Pulp Bleaching Company, was married in Baltimore October 25th to Mrs. Valentina Taube. Mr. and Mrs. Hill will make their home in East Orange, New Jersey.

In December, 1936, Mrs. Hill visited the Pacific Coast as interpretress for the two Russian pulp and paper executives N. A. Baranoff and G. M. Orloff, who were inspecting Pacific Coast pulp and paper mills.

Hawley News

Two digesters in the Hawley Pulp & Paper Company mill were shut down this month, and were relined by the Stebbins Engineering Corporation. They were scheduled to go back on the line about Nov. 15.

The company has purchased the old steamer "Weon" and has converted it to a wood barge for use in the Mill A basin, for storage of 2-ft. wood for the grinders.

Superintendent Carl Braun plans to start up their hydroelectric plant during November, as soon as the Willamette River rises sufficiently. The plant is usually operated for seven months of the year.

Dan Dupuis Now Manager of Ste. Anne

Dan E. Dupuis, who has spent some years on the Pacific Coast in charge of various pulp and paper mills, recently left with his family for Beaupre, Quebec, where he will be manager of the Ste. Anne Paper Co., Ltd. This is a subsidiary of the Abitibi Paper Co., one of the largest paper manufacturers in the world. Mr. Dupuis has been associated with this concern in the past, in various capacities and over a period of several years.

For the last four years Mr. Dupuis has been superintendent of the Lebanon, Oregon, mill of the Crown Willamette Paper Company. Prior to holding this position he was with the Hawley Pulp & Paper Company. He was connected with this company two different times, and during the last period was general superintendent.

In leaving Lebanon, he took with him the good wishes of all citizens of the community, in which he was an active civic worker. The Lions club presented him with a handsome leather suitcase at a meeting just before his departure with his wife and two daughters.

Paul Middlebrook, assistant to George Berkey, Crown Willamette vice president, has been supervising operations at Lebanon since Mr. Dupuis left. At the time of writing, no permanent successor had been appointed.

DAN E. DUPUIS
From Oregon to Quebec

Dedicate New Chemistry Building

The new Daniel Bagley Hall, the University of Washington's new chemistry and chemical engineering building, was dedicated by an appropriate ceremony on the afternoon of October 27th.

Daniel Bagley Hall is a modern, well-equipped building providing ample space for instruction in the fundamentals of chemistry and chemical engineering. A large number of special research laboratories have been provided for graduate work in special problems.

For the first time the University of Washington Department of Chemistry has sufficient space for instruction and experiment on a pilot plant scale. This is expected to prove especially beneficial in connection with the studies of fundamental pulping problems of Pacific Coast woods, such as Douglas fir. Equipment for pulping work is more complete than ever before although the University still needs additional equipment. The pulp mill unit of the Chemical Engineering Department is not yet complete and will be fully described in this journal at a later date.

At the dedicatory exercises on October 27th the speakers included Governor Clarence D. Martin of the State of Washington; Henry G. Knight, Washington's first graduate in chemistry (1902) and who is now chief, Bureau of Chemistry and Soils, U. S. Department of Agriculture; Dr. E. R. Weidlein, director, Mellon Institute of Industrial Research and president of the American Chemical Society; and, Dr. E. Fullerton Cook, professor, Philadelphia College of Pharmacy and chairman, Committee U. S. Pharmacopeia Revision. The new building houses the University College of Pharmacy as well as the Department of Chemistry.

Among the honor guests at the dedication was Dr. E. C. Lathrop, technical director of the Crown Zellerbach Corporation, whose headquarters are at Camas. Dr. Henry K. Benson is executive officer of the Department of Chemistry at the University of Washington.

Predicts B. C. Pulp Expansion

Early in October John F. Taylor, secretary and sales director of the E. B. Eddy Company of Hull, Quebec, told the Vancouver, B. C. Chamber of Commerce that the pulp industry has a great future in British Columbia.

Mr. Taylor was quoted in the press as saying, "In British Columbia the pulp industry is still in its infancy and nothing can hold back its development. I expect that the greatest growth in the future will be in broadening the market for pulp rather than for news print, because the rapidity with which new uses for sulphite pulp are being found is almost incredible."

Paraffine Opens Training School

A training school for foreman and key employees was opened early in November by the Paraffine Companies at Emeryville, California. The classes will be held weekly and under the direction of the personnel department. Company officials, executives and visiting specialists will serve as instructors according to W. H. Lowe, president of the company.

Finns Change American Sales Arrangements

In an announcement dated November 1st, the Finnish Cellulose Association of Helsingfors, Finland, announced through its managing director, Walter Grasbeck, that the Pulp Sales Corporation had been formed to represent the Association in the United States and Mexico effective December 1st. The new company replaces the Lagerloef Trading Company which has represented Finnish wood pulp producers in the United States for the past eighteen years.

The Pulp Sales Corporation will have offices at 230 Park Avenue, New York City. E. E. Barrett is president, E. Erickson, vice-president, and V. Ramsay is secretary-treasurer.

In his announcement Mr. Grasbeck stated in part: "The development of our trade in the United States is largely to be attributed to the policy of high ideals pursued by the Lagerloef Trading Company. The Pulp Sales Corporation will commence its activity along the same lines, maintaining this record of integrity. Shipments up until the end of the present year will be handled by Lagerloef but unexpired contractual commitments will be carried out through the new corporation."

Hans Lagerloef also issued an announcement on November 1st saying in part that the Lagerloef Trading Company points with pride to its record of accomplishment on behalf of the Finnish association from the days of inconsequential wood pulp imports into the United States to the present definitely large and well established market for Finnish pulps. He also announced the termination of his company's connection with the Finnish Cellulose Association as of December 1st and with the Finnish Wood Pulp Union on February 1st, 1938.

Mr. Lagerloef stated, "It is the intention and aim of the Lagerloef Trading Company to continue its efforts in the field of pulp distribution in the United States."

Ross Systems Installed

A Ross vapor absorption system was recently installed on the board machine of the Sidney Roofing and Paper Company, Ltd., at Victoria, B. C. A similar installation was also made on No. 2 machine in the Fibreboard Products, Inc., plant at Stockton, California, and some additions to the system made at the Antioch plant.

Crown Zellerbach Technical Men Meet

Technical men of the Crown Zellerbach Corporation met in Portland at the Heathman hotel on Friday and Saturday, November 5th and 6th, and discussed technical problems of pulp and paper manufacture.

Ostenson Back From Trip

"Heinie" Ostenson, paper machine superintendent at Camas for the Crown Willamette Paper Co., returned to the plant a short time ago after a business trip of two weeks in the East.

German Production Moves Upward

The marked upward trend which has been reported in the paper industry is borne out by the annual reports of a number of leading paper manufacturing concerns whose fiscal years close during the first 6 months of the year. The Ammendorfer Papierfabrik zu Ammendorf reports a keen demand for the company's products developed during the year. The initial improvement was in the domestic market but was soon followed by a rise in foreign orders, which increased by 20 per cent. The company reports, however, that the raw material supply is causing growing concern. A growing scarcity of pulpwood is complained of by other companies, a number of which have turned to waste paper as a supply of raw material.

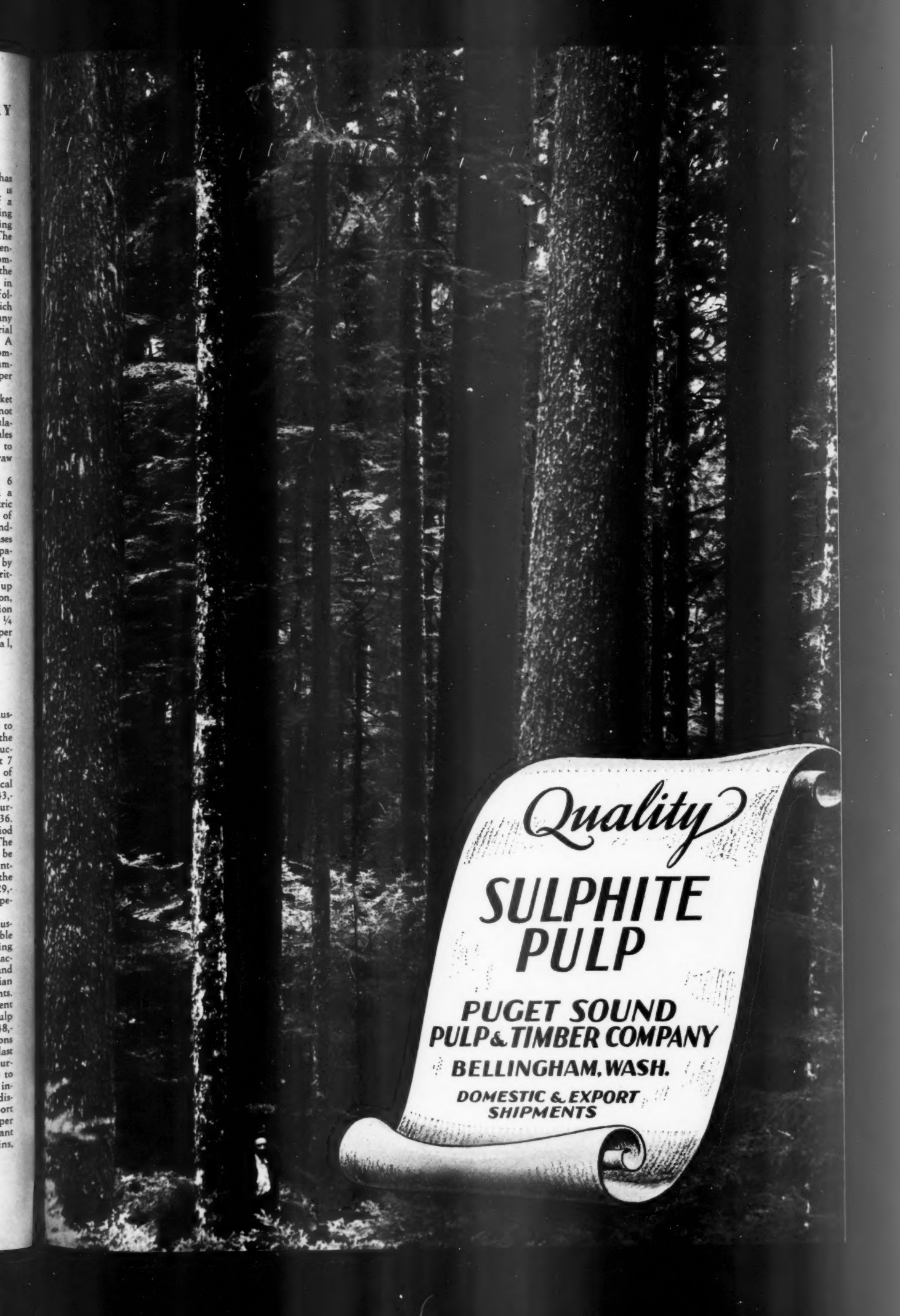
Prices obtained in the home market are considered unsatisfactory but cannot be raised owing to existing price regulations. The increases obtained in the sales to foreign markets were not sufficient to compensate for the rise in prices of raw materials and operation expenses.

Paper production during the first 6 months of the current year reached a total of 1,711,117 metric tons (metric ton = 2,204.6 pounds), an increase of 297,327 metric tons over the corresponding period in 1936. The largest increases occurred in the output of specialty papers and boards, which were higher by 26 and 18 per cent, respectively. Writing and printing papers which make up nearly ⅛ of the total paper production, increased only 7 per cent, and production of packing papers, representing about ¼ of the total production, increased 14 per cent. (American Consulate General, Frankfort-on-Main).

Austrian Pulp Production Higher

Production of pulp and paper by Austrian mills continues to rise, according to a recent report from the office of the Commercial Attache in Vienna. Production of chemical pulp during the first 7 months of the year reached a total of 174,570 metric tons, and of mechanical pulp 57,860 metric tons, as against 143,270 and 45,180 tons, respectively, during the corresponding 7 months in 1936. Paper production during the same period rose from 99,080 to 135,390 tons. The production of cardboard continues to be slightly lower than a year ago, amounting to only 27,230 metric tons during the first 7 months of this year as against 29,330 tons during the corresponding period in 1936.

Production of chemical pulp in Austria has increased by a considerable amount recently. Following the growing demand for this product from manufacturers of artificial silk, explosives, and similar materials, a number of Austrian manufacturers have enlarged their plants. During the first 7 months of the current year exports of unbleached chemical pulp (principally sulphite) amounted to 48,600 metric tons as against 42,800 tons during the corresponding period last year. Exports of bleached sulphite during the same period rose from 36,800 to 47,300 metric tons. A comparison of increases of both quantity and value disclosed the fact that the average export price obtained in 1937 was about 25 per cent higher than in 1936. (Assistant Trade Commissioner Henry E. Stebbins, Vienna).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Nootka Wood Products Starts Sawmill

The Nootka Wood Products Company, Limited, of Vancouver, B. C., of which A. E. McMaster is managing director, is starting its sawmill operations sometime this month. The Nootka sawmill is the first to operate on the west coast of Vancouver Island north of the Alberni Canal.

This is of interest to the pulp and paper industry because it has been rumored that later on the Nootka Wood Products Company will construct a pulp mill to fully integrate its operations.

The Nootka sawmill will be almost completely electrically driven and will have a rated capacity of 150,000 board feet per day.

Probably the most interesting feature of the mill will be its power plant, consisting of a modern gas engine of diesel type operating with gas from wood refuse fuel. The engine, of British manufacture, will produce 1,000 horsepower.

Unlike many mills located close to cities, Nootka Wood Products Company will be without a convenient outlet for its mill refuse. To barge hogged fuel or sawdust from Nootka Sound to plants that could make use of this material would be too costly. The company found itself facing the alternatives of wasting a large proportion of its side cut and refuse or utilizing it in the power plant. The installation now completed is different from any other in Canada or the Pacific Northwest.

Mr. McMaster and his associates believe that the producer gas plant, manufactured in Manchester, England, may ultimately be a factor in giving their company an important output of by-products. For instance, it is expected that when the operation gets under way a certain amount of the plant's feed will be converted into tar products. The plan is to reduce waste as much as possible.

How Gas Is Produced

The gas generator or producer comprises a casing constructed of thick mild-steel plates completely lined on the inside by firebricks, which also completely protects the top cover plate, thus preventing overheating and the corrosive action of acid vapors which are distilled from some classes of fuel.

When light fuels such as wood chips, sawdust are to be gasified, the gas is drawn from the fuel bed at aprpoximately the same velocity as the air for combustion passes through the fire in order to prevent the fuel from being drawn over the gas.

The firegrate through which the air for combustion is distributed to the fuel comprises a series of cast-iron annular plates arranged one above the other in steps, taking the form of an inverted flat cone with the outside edge of such succeeding lower plate so disposed to lie beyond the angle of the repose of the fuel, which falls through the opening in the plate above.

Owing to the comparatively high moisture content of the waste fuels, little or no steam is required for gasification purposes, but provision is made for generating a supply of steam by feeding water on to the stepped grate plates.

For cooling and washing purposes preparatory to the removal of tar the gas enters a cylindrical cooling tower consisting of two compartments filled with wooden grids arranged one above the other in the form of a grillage. In its passage through the cooler the gas is thoroughly cooled by intimate contact with streams of water supplied by an unchokable splash plate system of water sprays situated above the top grillage.

Leaving the top of the cooler, the gas enters a mechanically driven tar extractor, where it is subjected to a combined beating and centrifugal action, which throws out the tar on the sides of the casing, from whence it is washed into the collecting sump by a continuous spray of water.

The Sawmill Equipment

Nootka Wood Products will saw logs up to 72 inches in diameter and up to 60 feet in length.

The mill has standard heavy Pacific coast log deck equipment, steam nigger, twin circular head saw, four screw block log carriages and live rolls, capable of sawing timbers up to 24 inches by 24 inches by 60 feet in length.

Two Swedish gang saws designed to saw logs up to 30 inches in diameter and up to 36 feet long have been installed.

There are two edgers 8 by 48 inches and one six-inch by 36-inch designed for accurate sawing.

In the trimmer equipment there are two 60-inch circular saws and two trimmer tables equipped with high speed hollow ground circular saws designed for smooth cutting.

Grading and sorting tables are 200 feet long with four transfer chains in two sections. There is an independent log haul for each of the main saws so that each unit can be operated separately.

The method of operation is that one gang saw will be fed by cants broken down by the head saw. The second gang saw will be operated independently for round logs.

Steam power is furnished by two 72-inch by 18-inch return tubular boilers, which in addition to furnishing steam for the nigger feed engine and various pump cylinders, will drive an auxiliary 150 kilowatt engine and generator, but the main electric power will be furnished by the 750 kilowatt generator directly connected to the Crossley Premier gas producer engine.

British Columbia Pulp Paying Bond Instalment

The British Columbia Pulp & Paper Company met the interest instalment on its 7 per cent mortgage bonds November 1st, according to reports from Vancouver, B. C.

This payment indicates improved earnings which have permitted the company to make needed large capital expenditures in improving the plants at Port Alice and Woodfibre and at the same time to maintain working capital above $750,000.

Holders of the 7 per cent general mortgage bonds agreed to deferment of semi-annual interest payments which fell due between May 1st, 1932 and May 1st, 1934, until November 1st, 1940. Similar deferment was made of instalments which fell due between November 1st, 1935, May 1st and November 1st, 1936 and May 1st, 1937, with the right reserved by the company to make pre-payment from time to time on 30 days notice. One instalment was paid in 1935. Interest payments on these bonds are permissable only when they would not reduce the working capital below $750,000. Working capital as of December 31st, 1936 was $794,870 according to the company's statement.

Payment on the 6 per cent first mortgage bonds has been maintained in full to date. The British Columbia Pulp & Paper Company has strengthened its position during the present year by converting the Port Alice bleached sulphite pulp mill to the manufacture of rayon pulps, this being completed early in September; and by the installation of equipment at the Woodfibre mill to convert that plant to a bleached sulphite pulp mill. This latter work is expected to be finished toward the end of this year.

Powell River News

William Barclay, manager of Powell River Sales Company, is on a business trip to Honolulu, accompanied by Mrs. Barclay.

R. Bell-Irving, vice-president of Powell River Company, has returned to Vancouver head office after a trip to Montreal, where he made a survey of the news print situation affecting eastern Canadian mills.

Harold Foley, executive vice-president of Powell River Company, is back at the Vancouver office after a swing around the United States which took him as far east as New York.

Executive offices of Powell River Company at Vancouver have been completely remodelled and decorated along modernistic lines—chromium trimmings, oak furniture, translucent glass panels and so on.

Powell River Company's Kamyr machine will go into production November 10, and the first 1000 tons of wet pulp produced will be shipped direct to London, England, where the company hopes to develop an important market.

Only one unit of the Kamyr machine has so far been installed, giving an annual production of about 15,000 tons. A second unit, for which ample housing has already been provided in the new building erected last summer at Powell River, would give double that output, but it would also involve increasing digester capacity and other changes which the company does not intend to carry out at present.

Sale of pulp, as such, marks a departure in policy of Powell River Company, which in the past has sold only news print.

Form Australia Strawboard Company

A company known as Australasian Cellulose Manufacturers, Limited, was registered at Adelaide, South Australia, on July 16, 1937, with a nominal capital of £50,000. The object of the company is to establish a mill near Adelaide to produce from straw such products as paper, cardboard and building paper. Herr Johannes Herdt, who is described as a leading paper-making engineer from Germany, is now in Australia to advise on the details of the proposed new factory, but it is understood that definite arrangements for construction of the factory have not yet been completed. (Office of the American Trade Commissioner, Sydney).

Crown Zellerbach Dividend

On October 30th, directors of the Crown Zellerbach Corporation declared the regular quarterly preferred dividend of $1.25 per share payable December 1st.

Trade Talk

of Those Who Sell Paper in the Western States

Elkus Sells to B. M. & T. Form New Firm

Elkus Paper Company of San Francisco has gone out of the general paper jobbing business and has sold their merchandise in this line to Blake, Moffitt & Towne.

The Elkus stock of wrapping paper, bags, twine, sealing tape and some printing paper items has been transferred to the Blake-Moffitt new warehouse at Eighth and Brannan.

Richard and Eugene Elkus, heads of the Elkus firm, will concentrate their efforts on serving the restaurant and hotel trade through their new firm of Mangrum, Holbrook and Elkus.

Two Elkus paper salesmen — Robert Melton and Les R. Unruh—have joined the BM&T staff, with which they formerly were connected.

Kelly Named General Head in Los Angeles

R. L. Kelly, sales manager of the Los Angeles division of the General Paper Co., has been named manager of the division, succeeding L. A. Gronich, who is taking a well-earned vacation in the east and who will be associated, in the future, with the Midland Paper Co. division of the Zellerbach Paper Co. at Chicago.

Harry E. Bean, general manager of General, is to be in active charge of both the San Francisco and Los Angeles offices in the future. In the past he has confined his activities largely to San Francisco but from now on he will divide his time between the two cities.

Mr. Bean left early in November for a two-weeks business trip to Chicago and will return by way of Los Angeles.

Wylie Acquires New Line

C. H. Wylie, San Francisco paper mill representative, went east this fall and returned to the coast with a new line—Franklin Paper Company of Holyoke, Massachusetts, manufacturers of bristols. Mr. Wylie's other principals are the Riverside Paper Company, Appleton, Wis., manufacturers of sulphates; Advertisers Paper Company, Holyoke, manufacturers of cover and text papers and the Rex Paper Company, Kalamazoo, manufacturers of coated book papers.

British News Print Price About $60

From Sweden reports indicate that newspapers in Great Britain are contracting for 1938 delivered news print at from $60 to $62.50 per ton f.o.b. mill in Sweden.

Maxwell To Handle Smith Lines In San Francisco

Edward N. Smith, Los Angeles paper mill representative, has named Richard D. Maxwell to handle his lines in San Francisco succeeding Raymond Bond, who is planning to go into government service.

Dick Maxwell has been associated for several years with his father, D. L. Maxwell, Pacific Coast representative and treasurer of The Tissue Company. The Maxwells have offices in the Robert Dollar building and Dick will continue his connection with his dad.

Maxwell will handle, for Smith, sales for the Tuttle Press, Central Paper Company, Crystal Tissue Company, Rhinelander Paper Company and the West Carrollton Paper Company.

Zellerbach Service Pins Awarded

Frank C. Stratford, manager of the San Francisco division of Zellerbach Paper Co., has returned to his desk from a furlough and one of his first jobs was to award service pins to the following employes:

Paul Edstrom	20 years
Ed Falk	25 years
A. Bundensen	25 years
Sol Friedenburg	30 years

W. F. Klinker of the Seattle division receives a 20-year pin this year and Lena May Clark of the Sacramento division receives a 30-year pin.

Fiber Boxes For Wenatchee Apples

It is reported that the Beebe Orchard Company of Wenatchee, Washington is packing its Golden Delicious apples in fiber boxes in the hope of greatly reducing the bruises to the fruit.

The fiber container is slightly larger than the wooden boxes it is supplanting to compensate for the bulging permitted by wooden box tops and bottoms, but the fiber box holds the same number of apples. Elimination of the tight squeeze caused by lidding the wood box is believed will cause less damage to this delicate apple.

In the fiber box tier pads are used for cushioning and the apples are wrapped in oiled paper. Most of the apples packed in the new boxes are being shipped to Chicago and New York markets.

It was also reported from the apple districts that some shippers were contemplating using paper bags for shipping apples to the Middle West, laying them on straw to insure safe shipment. This would reduce packing costs at a time when apple prices are at a low point.

Nelson Sells To Zellerbach Paper

Nelson Paper Co., Oakland jobbers, have been bought out by the Zellerbach Paper Co. and consolidated with that firm's Oakland division. E. F. Beine, formerly head of the Nelson company, is now with Zellerbach in Oakland.

Lowe Predicts Building Boom

A big building boom, with an increase in demand for building papers, is predicted by W. H. Lowe, San Francisco, president of The Paraffine Companies, Inc.

"Statisticians say the nation needs a million and a half homes," says Mr. Lowe. "There is enough building work needed to keep all the building trades busy for the next five years.

"One interesting reason put forward for the demand for new homes is the fact that fires have destroyed more homes than have been built in recent years. Another reason is the fact that rents are going up, thus making tenants think more and more of owning their own homes.

"Prices will not stay so low long because there is a growing demand for more housing facilities."

The Paraffine Companies manufacture building papers and owns important interests in Fibreboard Products, Incorporated, and a number of other paper concerns on the Pacific Coast.

W. H. LOWE
President of Paraffine

Field-Ernst To Move

Field-Ernst Envelope Co., San Francisco, expect to be moved by December 1st from 45 Fremont Street to their own new building at 245 Fifth Street, corner Tehama, where they will have 47,000 square feet of space as compared with 38,000 in their present location.

The new building consists of two floors and a mezzanine, which extends part of the length of the first floor now but which can be extended the entire length later, if desired. The first floor has a 21-foot ceiling.

All the manufacturing activities will be on one floor in the new building. One new feature will be installation of hydraulic lifts to lower and raise the skids or "flats" as stock moves to and from them from the die cutting machines. These lifts make it unnecessary for the machine operator to stoop to reach the skids.

Field-Ernst Envelope Co. was formed in 1920 by Alan D. Field and Joseph A. Ernst, then employes of the Union Lithograph Co. Field was a salesman and Ernst plant superintendent. In the envelope company Mr. Field handles the office and sales and Mr. Ernst the plant activities. Mr. Field is president and Mr. Ernst vice-president.

The company owns its own new building and is making an expenditure of approximately $200,000 in the plant and new equipment.

PULP
BLEACHING
COMPANY

ORANGE
NEW JERSEY

•

CELLULOSE
PURIFICATION

Two Zellerbach Men Married

Wedding bells rang recently for two Zellerbach people. One was E. J. Hansen, of the Los Angeles division, who was married at Las Vegas, Nevada, and shortly thereafter transferred from the Lily-Tulip cup department to the printing paper sales promotional department. The other Zellerbach bridegroom was Bob Steiner, a graduate of the firm's sales school, who was married to Miss Doris Clayburgh at a big social wedding on the San Francisco peninsula. Mr. Steiner is with the Midland Paper Company division of Zellerbach's at Chicago.

B. M. & T. Installs Cafeteria

In its new location at Eighth and Brannan Streets, San Francisco, the Blake, Moffitt & Towne paper jobbing headquarters is located pretty far from a shopping center, so the company has established a cafeteria on the roof to serve its 75 employes. On the roof also is a big sun deck and a card room and a shower room is contemplated for later.

Wall Boards and Insulating Materials

is the title of a new 31-page mimeographed bulletin just released by the Forest Products Division, Bureau of Foreign and Domestic Commerce, Washington, D. C.

Among the industries which have enjoyed a phenomenal growth during the past 25 years is the production of wall boards and insulating boards and materials of various sorts. Originally designed, as the name implies, as a lining for walls and partitions, wall boards are now extensively employed for a wide variety of purposes. Outside of their use as wall panelling in homes, offices, cabins, and camps, they are employed by automobile manufacturers as a lining for cars, by the motion picture industry in the construction of temporary "sets," and at fairs and expositions in the construction of display booths and signs. Insulating materials are not only being utilized to an increased extent as a protection against heat and cold in the construction field, but to deaden and transmisison of sound in walls and floors and to correct acoustics in auditoriums, motion picture studios and radio broadcasting studios.

This bulletin has been published with a view to answering numerous requests for information in regard to production methods, basic raw materials, for statistical data, production and consumption trends, new uses developed, and a host of other questions received from manufacturers and others interested in these products. In addition to brief discussions on the foregoing subjects, the bulletin contains tables of thermal conductivity of the various types now on the market, domestic production, exports, a list of suggested uses, a partial list of manufacturers of trade marked products, and a bibliography.

This release represents the third revision of this bulletin and embodies the most recent information which the Forest Products Division has on the subject. It may be secured, free of charge, upon request direct to the Forest Products Division, or through the District and Cooperative Offices of the Bureau of Foreign and Domestic Commerce.

SUPERINTENDENT OR ASSISTANT SUPERINTENDENT — 30 years experience kraft, sulphite and specialty papers, greaseproof and glassine, Imprint, Fourdrinier and Yankee machines. Expert colorman. Address reply Box 16, care Pacific Pulp & Paper Industry, 71 Columbia St., Seattle, Wash.

Oregon Pulp & Paper Down Temporarily

The sulphite pulp and paper mill of the Oregon Pulp and Paper Company at Salem, Oregon shut down temporarily October 30th due to lack of orders. Operations of the Salem mill have been steady during the present year but in previous years shutdowns were numerous and operations seldom at capacity.

Pacific Straw Board Running Full

The Pacific Straw Paper & Board Company plant at Longview continues to work full time, with a strong demand for their products. The board mill is running four 6-hour shifts, seven days a week, while the box plant operates three 8-hour shifts five days a week.

Because of business demand, manager Arthur Zimmerman did not shut down the mill the week of Nov. 8 as planned, but has postponed installation of the 12 additional dryers until they shut down during the Christmas holidays.

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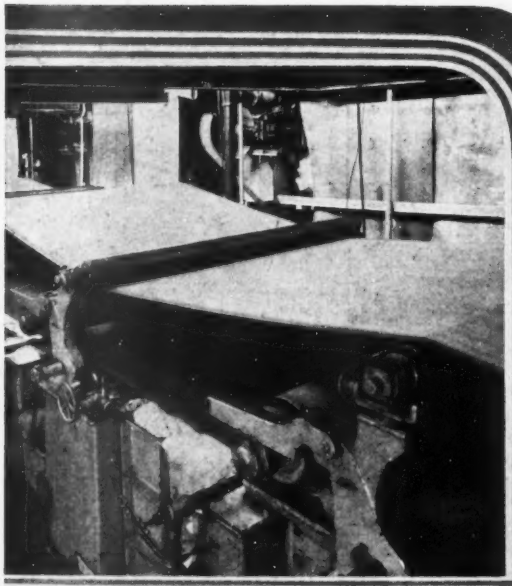

FACTS ARE FACTS

Mills that have conducted comparative felting tests have declared Orr to be the winner. They have found that felts of this famous line will outlast other makes by as much as several days.

If you could visit our factories and see the care with which Orrs are made you would at once realize why these felts have superior weave, nap, porosity, resiliency, and resistence to wear.

The services of our representatives are at your command. Ask any one to specify that particular Orr felt which will best do your water removal job. Contact him directly or write the factory.

The Orr Felt & Blanket Co.
PIQUA, OHIO

Pacific Coast Representative:
WALTER S. HODGES, Pacific Bldg., Portland, Ore.

ORR FELTS

New Products At the Leipzig Fair

Paper exhibits at the Leipzig Fall Fair occupied display space of 4,120 square meters. Of the 374 exhibits of paper products and printed materials, more than 300 were devoted exclusively to paper products. The exhibits of paper packing materials were most noteworthy for the number of new articles which have recently been placed on the market with a view to displacing metal articles and thus reducing the amounts of metal which are required to be imported.

Standing out among these articles were cylindrical containers with a content volume of from one-half liter to 30 liters. (A liter equals 1.0567 quarts). The smaller ones which are of hard brown paper are designed particularly as containers for chemicals, paints, wax, etc., and in addition to being waterproof they have protective linings of white or aluminum paint. The larger containers of 15 and 30 liters volume are of papier mache, which is lacquered to make them waterproof. These larger containers are steel bound and have wooden tops. In addition to cylindrical containers entirely of paper, there were also displayed various kinds, of which only the top is entirely of paper and the bottom is of tin. These are designed particularly for shoe polish and similar products. Another type of paper container exhibited in a number of new shapes for various products hitherto packed only in metal, was a moulded product known as "Pappeguss." These containers are lined with a layer of fiber which adds considerable strength and, if the product to be packed is wet or such that it will absorb moisture, a layer of paraffine or some other suitable substance is added.

Outside of the paper containers mentioned there were only a few innovations and improvements in packing materials. One which attracted considerable attention was the new type of egg crate made of hard, waterproof cardboard. This crate had a capacity of 360 eggs, each of which was packed in a separate partition. Ventilation is provided through a number of holes in the side of the crate, as well as in the trays, which are placed between each of the 10 sets of partitions. The particular advantage of this cardboard egg crate is that it weighs only one-half as much as the wooden cases.

Other innovations exhibited were: a shipping container especially designed for shipping bicycles; a number of newly designed cover papers; a new type of envelope prepared with a strip of rubber gum on both flap and back of envelope.—American Consulate, Leipzig.

Paper Products Shown At Prague Fair

The Fall showing of the Prague Samples Fair was held September 3 to 12, inclusive, and as heretofore the exhibit of paper products was directed by the Prodejna Spojenych Papiren (sales office of the Associated Paper Mills). Only a few of the products on view had not been exhibited previously. Among these were double kraft crepe with an inner tar layer. This paper which is particularly recommended for making bags for packing hygroscopic products was evolved here from the single kraft crepe surfaced with tar on one side which is usually used locally for lining barrels.

A ventilated basket for fruit was exhibited for the first time at the Fair. It is made of heavy grey cardboard and is used for transporting fruit, particularly apples and pears, by rail and truck. Numerous round perforations provide ventilation and cut down the weight of the container. This ventilated basket container is expected to find fairly wide use here in the delivery of fruit from wholesalers to small retailers. It is permitted in the packing of up to 20 pounds of ruit.

One novelty was an ordinary white paper cup decorated in chocolate brown. The decoration consists of a strip of white paper painted brown pasted around the entire cup from brim to base, with the two pasted ends of the strip extending beyond the outer surface of the cup to form an ear.

Another novelty in the line utilizing kraft paper were elongated paper bags recommended to protect rose bushes during winter months. These bags were introduced about two years ago and were again brought forward at this year's Fair. The bags are recommended as a protection to prevent the formation of ice on rose bushes and the possible burning of such bushes after the ice has formed.—Assistant Trade Commissioner Theodore J. Hadraba, Prague.